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Want a preview look at SOJARR OF TITAN that will make you haunt the newsstands, waiting for the March issue of STARTLING STORIES to appear?

Three-year-old Stuart Rapidan is the sole survivor of an interplanetary space crash on Titan, Saturn's satellite. Alone, helplessly stranded amidst the wreckage of the rocket craft, he gazes uncomprehendingly at the corpse of his father. Stuart Rapidan is a child alone on a friendless world. He must learn to fight for survival.

There was another Earthman in the same sort of spot once. Remember?—Tarzan. But Tarzan had apes for company. Stuart Ra-pidan—he calls himself Sojarr—has to learn to shift for himself. He's hungry and thirsty

THE STREER VIBRATES—with the letere of the street of the

-and he has to do something about it. Soiarr must discover which of the wild vegetations are edible, which of the strange creatures that roam his world are friendly or savage.

And, a few months after his space crash, Sojarr makes an amazing discovery. A radio in the wreckage of the space ship . . . that still works! Sojarr twists the dial . . . and he hears the voices of Earthmen, never realizing for a second that he is an Earthman himself!

That's the dramatic start of SOJARR OF TITAN. There's plenty more that happens as you see Sojarr grow to manhood, meet the nomadic races that wander over the face of Titan. And he finally solves a secret thousands of years old! You'll find SOJARR OF TITAN different and refreshing. It's new from start to finish.

Hall of Fame

Here's Number Three on your fantasy hit parade, as selected by famous fantasy fol-lower Ted Carnell, representing Great Britain's fandom.

Carnell's choice for the March issue's HALL OF FAME selection is Stanley G. Weinbaum's immortal masterpiece, WORLDS OF IF. It's the only time-travel tale Weinbaum ever wrote and was deemed worthy enough to be republished in the Weinbaum Memorial Volume.

Star Issue

The next issue of STARTLING STO-RIES is a "must" from cover to cover. Extra short stories, plus all our regular ex-clusive features. More highlights of science and invention in THRILLS IN SCIENCE, a new I.Q. workout for addicts of the SCIENTIFIC CROSSWORD PUZZLE, and many other famous fantasy features! Now for the fireworks!

LETTERS FROM READERS

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Profits Typical of the Young, Growing Industry

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THE ETHER VIBRATES

(Continued from page 6)

handfuls of hair, and go plain space-crazy from the conflicting opinions of ardent fans. But, believe Ripley or not, your editor approaches the mail bag with an expression of fiendish glee on his pan, spits on his hands, and digs into the dirt with genuine relish. You can take it straight from the shoulder, you armchair space rovers, that we can laugh and snarl at the same moment. can take it right smack in the old physiognomy or in the pantry at the identical instant we think we are dishing it out. And the boys in the (de)composing and art rooms can do the same—we hope. If they can't it's just too bad—for you "Ether Vibraters" sometimes shake the fuzz off a Venusian peach and leave the atmosphere in convulsions. Many a postman who carries our mail goes home at night wondering where he got those sizzling burns on his back. What do we mean?

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By M. W. Gordon In re the feature story in November's STARTLING STORIES: "A Million Years To

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writer. window. window.

In other words, I don't like the story. Do you buy these things because your readers like them, or is it that you can't set good yarns?—720 Sheperd St., N.W., Washington, D. C.

Roll up both sleeves and hang onto your corset strings. Brother Gordon, to put it mildly, doesn't care much for Henry Kuttner's latest job. And we thought it was good enough to print. Well, that just shows

to go you how badly off his base a wild-eyed editor can get. Anyway, we love a man—or a woman—who can speak his mind. Gordon may go to the head of the class.

But—hold on a moment. What's this
modest little postal clinging to the side of
the mail sack in such a coy fashion! Out into good daylight, you little Martian sli-

therer, and let's have a glance at you! A BOOT FOR THE OTHER FOOT

By Harry Schmarie

Have just finished reading "A Million Years to Conquer." It left me breathless—as do all Startling novels. Didn't think Henry Kutther had it in him. How about an Eando Binder novel in the near future?

Sincerely, Muscatine, Iowa. Well, muss our hair and call us Willkie,

if this Schmarje spatial pilot hasn't set his course smack-dab across the bow of Navi-gator Gordon's interplanetary craft! Go (Continued on page 12)



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THE ETHER VIBRATES

(Continued from page 9)

ahead, you boys, and argue this one out. It's all in the family, and the neighbors enjoy a first-class airing of family secrets

What are the rest of you guys doing, snickering or yawning up your sleeves? Small stuff, eh? Well, get a load of this one we just pulled out of the mail bag. You can fry a dozen eggs and then have a clam-bake on it. And he dares us to print it! True, it may set a couple of post offices on fire and scorch the shirt tails of a few Nor-rainnor-sleet-nor-snow gentlemen, but here she gets served up, piping hot and smoking.

FOUNDING A NEW SOCIETY

By Parmer Farrell

Trail what has Occar ! Friend got on you, ments with him to take an ordinary hackmal popment instead of making you infect those popment instead of making you infect those popment in the property of the public ! S. S. has reached a new low with the public ! S. S. has reached a new low with the public ! S. S. has reached a new low with the public ! S. S. has reached a new low with the public ! S. S. has reached a new low with the public ! S. S. Has reached a new low with the public set in the set i

"The World Without," still as good as ever. I notice that all the letter writers have the last last letter writers have the last laste. Evidently these gentlemen have never read "The Count of Monte Cristo," semblance of plots—too startling, in fact, we semblance of plots—too startling, in fact, we semblance of sits of the stories, in scheme faction, or all one of the stories of get past. (I

In the whole year 1940 the only really good piece of work you have printed was "Twice in Time." I expect the reprints, which have all been good.

all been good.

Aside from the stories, what's wrong with these alieged artists? Besides whose and blers who would be the stories and the stories where the stories are the stories and the stories are the stories are the stories and the stories are the st

Hoping for a hetter SS, Tunica, Mississippi. P.S. I dare you to print this.

Now, if we can only lay our hands on that guy Friend. . . . We had him on the point of a sword or a ray gun just a moment ago. Anybody who would be so low-down as to come into our editorial sanctum and beat us into insensibility with a manuscript of this nature and then leave it on our desk ought to be space-wrecked on the most barren asteroid. You fellows don't realize what a long-suffering editor has to put up with.

And especially after a tough night spent
over a bridge table where some old battle-ax or war-horse wants to shout you down with their particular brand of politics or ace-trumping, is it any wonder we stagger to

our office and get slugged by space-drunk writers like Friend?

All right-maybe it was Joe's Bar instead of a bridge table in Jackson Heights. So what? Oscar J. Friend distinctly did not see us buty the body. We've got more on him than he has on us. And, acting on Pilot Farrell's urging, we were just about to call Friend up and ask for a refund when the red-haired copy boy dug this little gem out of the bag.

SUPREMACY IN THE FIELD

By J. H. B.

I have long been a reader of science fiction.

I have long been a reader of science fiction reads to the science of the scienc immediate future.

sid that will be darn hard to exceed in the immediate future. Mediaval, attmosphere and intrigues in Wellman's tale brought it to the level of tree literature and Virigil Phina; and the level of tree literature and Virigil Phina; as skillfully projected the mood of the story as far as Illustrations are concerned. May I are a literature and Virigil Phina; as skillfully projected the mood of the story as far as Illustrations are concerned. May I are a literature and the story as faction magazines have needed for years to faction on the work there is none of the styllzed monotony which has marked the installed monotony which has been been proposed to the proposed point of t

From the two combon had hope for which we have been combon and the post through the had been combon and the select filling which has happened in the select filling which had been combon and the select filling which we have a selectification at originating the selection of t

So there you are. Orchids on one handor skids under the other. Just as big as life and twice as natural. A fellow takes a bow on one side and take a kick in the fan-tasy on the other. However, grief over authors

(Continued on page 122)





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Grand Opera.

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For whole minutes we held the bridge against that savage swarm! (Chap. XIX)

that savage swarm! (Chap. XIX)

CHAPTER I

The Rune Key

RAY called excitedly to me from the forward deck of the schooner.

"Keith, your hunch was right. There's something queer in this trawl?" Involuntarily I shuddered in the sudden chill of fear. Somehow I had known that the trawl would bring something up from the icy Arctic sea. Pure intuition had made me persuade Bray to lower his trawl in this unpromising spot.

"Coming, Bray!" I called, and hurried through the litter of sleds and

snarling dogs.

Our schooner, the sturdy auxiliary ice-breaker *Peter Saul*, was lying at anchor in the Lincoln Sea, only four hundred miles south of the Pole. A hundred yards away, the dazzling white

fields of ice stretched northward-a vast, frozen, scarcely explored waste.

When we had reached the ice-pack the night before, I had somehow conceived the idea that Bray, the oceanographer, ought to try his luck here. Bray had laughed at my hunch at first, but had finally consented.

"Are you psychic, Keith?" he de-manded. "Look what the trawl brought

A heavy, ancient-looking gold cylinder, about eight inches long, was sticking out of the frozen mud. On its sides were engraved a row of queer symbols, almost worn away.

"What in the world is it?" I breathed. "And what are those letters on it?"

Halsen, a big, bearded Norwegian sailor, answered me.

"Those letters are in my own lan-

guage, sir."

Nonsense," I said sharply, "I know Norwegian pretty well. Those letters

are not in your language."

"Not the one my people write today," Halsen explained, "but the old Norsethe rune writing. I have seen such writing on old stones in the museum at Oslo.'

"Norse runes?" I blurted. this must be damned ancient." "Let's take it down to Dubman,"

Bray suggested. "He ought to be able

to tell us.

Dubman, the waspish little archaeologist of the expedition, looked up in annoyance from his collection of Eskimo arrowheads when we entered. Angrily he took the cylinder and glared at it. Instantly his eyes lit up behind the thick spectacles.

"Old Norse!" he exclaimed. these are runes of the most ancient form-pre-Valdstenan! What is it?"

"Maybe the runes on it can give us

a clue," I said eagerly. "I'll soon find out what they mean," Dubman declared.

7ITH a magnifying glass, he began to examine the symbols graven on the golden cylinder. Bray and I waited. I felt queerly taut. I could not understand just why I was so excited about this find, but everything about it had been queer. A persistent inner voice had kept telling me: "Make Bray let down his trawl here!" And the first time it was lowered, it had brought up a gold tube that must have lain on the sea-floor for centuries.

"Got it!" Dubman stated, looking up. "This thing is old, all right-the most ancient form of runic. The translation doesn't tell much. Listen to this."

> Rune key am I, Chaining dark evil, Midgard snake, Fenris, And Loki, arch-devil. While I lie far, The Aesir safe are. Bring me not home, Lest Ragnarok come.

A chill rippled through me, as though even the translation of those ancient runes could terrify me. Impatiently I shook off the feeling.

"What does all that stuff about the Aesir and Loki mean?" I asked.

"The Aesir were the ancient Norse gods, eternally youthful and powerful. Ruled by Odin, they lived in the fabled city of Asgard. Loki turned against them. With his two familiars, the monstrous wolf Fenris and the great Midgard serpent, Loki joined the Jotuns, the giant enemies of the gods. gods finally managed to chain Loki, his wolf and his serpent. But it was predicted that if Loki ever broke his bonds. that would bring about Ragnarok-the doom of the Aesir.

"Bring me not home, lest Ragnarok come," he quoted. "This key claims to be the one with which Loki and his pets were locked up. Probably some ancient Norse priest made it to 'prove' the old myths, was shipwrecked and

lost it in the sea."

"I don't get it," Bray complained. "What made you tell me to let down my trawl in just that spot, Keith?'

When I picked up the gold cylinder, a current of queer power ran up my arm. Somehow it seemed to warn me to drop it back into the sea. But I didn't obey, for something alien commanded me to keep the rune key.

"Can I study this for a few days?" I asked abruptly. "I'll take good care

"I didn't know you had archaeological tastes, Masters," Dubman said, astonished, "But you were responsible for finding it, so you can keep it awhile.

"Don't lose it, though, or I'll skin you."
Through the little ring on one end
of the cylinder, I passed a cord and
hung it around my neck. It was cold
against my skin—cold and menacing,
persistently warning....

TATURALLY I tried to convince myself that I just wasn't the superstitious type. Besides my thirty years of disciplining myself to examine even obvious truths, and my towering height of lean muscle, I have inherited the canny skepticism of my Scottish ancestors. Anyhow, a scientist couldn't admit the existence of the supernatural. Like most other physicists, I claimed there were still a lot of forces which science hasn't had time to investigate yet. When it does, there will be no room for superstition, for belief in the supernatural is merely ignorance of natural laws.

But I worked twice as hard as anybody else, unloading our small rocket plane for my first reconnaissance flight northward. Not even intense physical labor could make me forget the sinister cold force of the rune key inside

my shirt, though.

The menacing current felt even stronger when I stood on deck that night. Overhead, the aurora borealis pulsated in shifting bars and banners of unearthly radiance, changing the immense frozen ocean from white to green, violet and crimson. Like a mad musician, the freezing wind strummed the schooner's halyards and made the masts boom out their deep voices.

But the rune key under my shirt tormented me with its conflicting demands. It ordered me to throw it back to the icy waters. Helpless, I ripped it out and tugged at the cord, trying to snap it. An even stronger command

made me put it back.

The moment I buttoned my shirt, I cursed myself for being a fool. Why should I want to destroy something of potential value to science? Inwardly, though, I realized that the demands of of the rune key were stronger than my own will.

"It can be explained scientifically," I muttered uneasily. "Everything has a scientific explanation, once we can isolate it."



Thor

But how could a small, golden cylinder penetrate my mind and order it about like a servant? What filled my heart with doubt and dread?

For all my canny skepticism and scientific training, I couldn't answer those insistent questions, nor keep myself from being tormented by the damned thing. . . .

CHAPTER II

Mystery Land

The Sun glittered on the white icepack, the placid gray sea and the battered hull of the Peter Saul. I was ready for my first reconnaissance flight northward. Doctor John Carrul, chief of the expedition, called down to me from the rail of the schooner.

"Don't go too far the first trip, Masters. And return at once if the weather

grows threatening."
"There won't be any storms for days," I replied confidently. "I know Arctic weather."

"You'd better leave that rune key with me," Dubman shrilled. "I'd hate to lose it if you cracked up."

During the past few days, the golden cylinder hadn't been out of my thoughts. Whatever menacing force radiated from the key, it was still far beyond my science. I had tested it with electroscopes, but they registered nothing. Yet it did radiate some disturbing force. It was the same with the mental command that fought the one which tried to make me throw away the key. Apparently supernatural or not, it had to have some rational, mundane explanation.

My obsession with the mystery had made me read Dubman's books on old Norse myths. The Aesir, said the legends, inhabited the fabled city of Asgard, which was separated from the land of Midgard by a deep gulf that was spanned by a wonderful rainbow bridge. All around Migard lay the frozen, lifeless waste of Niffleheim,

In the great hall Valhalla reigned Odin, king of the Aesir, and his wife Frigga. And in other castles dwelt the other gods and goddesses. Once Loki had been of the Aesir, till he turned traitor and was prisoned with his two monstrous pets, the wolf Fenris and the Midgard serpent Iormungandr.

I read about the Jotuns-the giants who lived in dark Jotunheim and incessantly battled the Aesir. Then there were the dwarfs of Earth, the Alfings who dwelt in subterranean Alfheim. Hel, the wicked death-goddess whose dreaded hall was near the dark city of the Jotuns. Muspelheim, the fiery realm beneath Midgard.

One thing in these legends impressed They depicted the Aesir as mortal beings who possessed the secret of eternal youth in common with the giants and dwarfs. None of them grew old, but any of them could be slain. If

Loki were released, bringing about

Ragnarok-the twilight of the godsthe Aesir would perish.

As I delved deeper into the books of Rydberg, Anderson and Du Chaillu, I learned that ethnologists thought there was some real basis to these legends. They believed the Aesir had been real people with remarkable powers.

All my reading had only intensified my interest in the enigmatic rune key from the sea. I knew it bordered on superstition, but I felt that if I were away from the influence of others, the damned thing might actually get coherent.

"ILL be back by four o'clock," I said. "It won't take me long to map a sled route."

"Be sure you take no chances," Dr.

Carrul called anxiously. Streaking across the ice, the rocket

plane roared into the chill air. I circled above the schooner, climbed higher, and then headed northward across the ice-pack. Within ten minutes, I was flying over the endless expanse of the frozen Arctic Ocean, warm and snug in the oxygen-filled cabin.

A vast white plain, glittering like diamonds in the sunlight, the sea ice had jammed and split, and there were long leads of open water. My mission was to chart the easiest route toward the Pole, so the sleds would lose no time detouring around leads or scrambling over ridges. Once a weather observation camp was established, I would carry it supplies in the plane.

Hundreds of thousands of square miles of the enormous sea of ice had never been seen by man. Earth's last real home of mystery was dazzlingly beautiful-but it was murderous, terri-

fying, sinister. . . .

Absorbed in keeping the plane on its course and making a map of the ice below, my sense of time was temporarily paralyzed. The rocket motor roared tirelessly, and the ice unrolled endlessly below. When my ship lurched sharply, I abruptly realized that the wind was suddenly rising. I looked around, startled. A huge dark wall was rising across the southern horizon.

"Damn it, I'll never call myself a weather prophet again," I swore. "There just couldn't be any storm.

But there it is!"

I banked around sharply and flew southward, fighting to rise above the fury. But the higher I climbed, the higher the black, boiling wall of the storm seemed to rise. I knew I was

"Two minutes to live," I gritted.

"It'll be a fast death-"

Driving before it a cloud of stinging snow, the storm smacked my plane like a giant hand. Stunned by the impact, deafened, I swung the nose around and let the wind sweep the plane northward. There was no hope of fighting, I could only run before the gale until its fury subsided. The whole sky was dark and raging around me, filled with screaming wind and snow. Gripping the firing wheel, I battled to keep the reeling plane in the air.

But why did the rune key inside my shirt seem to throb with frantic warning? Why did that alien voice in my mind seem eager and exultant? Why



did I feel there was something purposeful about this gale's direction? The storm had come up suddenly out of a clear sky as soon as my plane was well in the air. Now it was hurling me straight in one direction.

The imminent peril of death grew less unnerving than the mounting suspicion that there was something deliberate about the storm. The warning force throbbing from the rune key, and the wildly exultant alien voice in my brain, combined to demoralize me.

After nearly six hours of ceaseless storm-driven flight, I received the storm-driven fleen, I received the greatest shock. Peering ahead through the frosted cabin windows, I realized suddenly that there was a great area dead ahead—which I could not see! "It can't be real!" I gasped. "A colossal blind spot—"

Y vision seemed to slide around that vast area. I could see the ice-pack beyond it, scores of miles away. I could see the ice on either side of it. But the area itself just didn't register.

"Some trick of refraction, perhaps due to the terrestrial magnetic currents that are strong here," I muttered. "Maybe it's connected with the mys-

tery of the aurora."

My scientific reasoning didn't quiet my nerves. For the storm that bore me on was carrying me straight toward that huge blind spot. When I was almost to the edge of the enignatic area my vision seemed to slide away to either side, almost at right angles. If this was refraction, it was a type that was completely unknown to science.

My storm-tossed plane hurtled with reckless speed toward the edge of the vast blind spot. I could see nothing whatever ahead. Everything seemed crazily twisted out of focus, distorted

by that weird wall.

Abruptly the gale flung my reeling plane directly through the fantastic wall that defied my vision—and I was inside the blind spot! But now I could not see outside it.

"This—this is impossible!" I gasped

with startled terror.

I could see nothing but the interior, a great space of tossing ocean, curving ominously to every sinister horizon. Black waves, black clouds... Suddenly I gasped in amazement. Far ahead loomed a long, high mass of forbidding, dark land.

The storm still howled with all its original fury, carrying me dangerously low over the foam-fanged waves toward the distant land. Through the scudding snow, I detected a faint greenish radiance. But realization of my immediate peril swept away my demoralization. I could not land in that vicious sea. Yet neither could I climb again in that gain that greenish gre

The land I had glimpsed was now a mile ahead of me, its frowning eastern cliffs stretching right across my course. The gray precipices were hundreds of feet high. Above them, the land ran

back into dark forests and shaggy, wooded hills where no landing was possible. Then I saw a small beach strewn with boulders. Pure desperation made me head the plane toward it.

Over the boiling white hell of breakers I shot. My wheels touched the beach. Before I could brake with the forward jets, the port window smashed against a projecting boulder. But that was the only damage when I stopped out of reach of the waves.

I shut off the rocket motor and stumbled out of the ship. My knees were trembling with the reaction of prolonged tenseness. But the land and sea inside the incredible blind spot made me forget my exhaustion.

THE air was keenly cold. It was the cold of an ordinary northern spring, though, not the bitter polar chill it should have been. The sky was dark with clouds, fleeing before the gale. The boom of raging surf and keen of wailing winds were loud in my ears. Stranger even than the comparative warmth was the faint green radiance that seemed to pervade the air. An eldritch glow that could barely be seen, it seemed to stream upward from the ground. It was oddly exhilarating.

"Might be gamma radiation from some unknown source," I reasoned. "That may account for the refraction that makes this whole area a blind spot. I wish I had instruments here to check. Hope it doesn't have the usual effects of gamma radiation on human tissue.

But it seems invigorating."

Excitement began to rise in me. I had found a hidden land of strange warmth completely unknown to civilization, here in the polar wastes. Its strange trick of refraction had defied discovery until now. No scientist could have been dropped in that blind spot without feeling the urge to explore. Waiting for the storm to die down, flying out of the blind area and getting back to the ship for a regular exploration party would have been wiser. But like every other man, I had the desire to be first in an unknown land.

I moored the plane between two boulders and removed my flying togs to don regulation exploring clothes for Arctic weather. With a pack of food pellets

and blankets on my back, I began to climb the jagged, craggy wall.

Gasping for breath, I reached the rim of the lofty cliffs. Cold sea winds buffeted me, and the boom of bursting breakers came muffledly from below. Harshly screaming sea-gulls soared and

circled around me.

To my right lay the edge of the cliffs. To my left, a strip of heather ended in a forest of fir trees, bending in the wind. Beyond the dark fir forest, shaggy, wooded hills rose steeply. Toward the south lay the greater part of the land, rising into higher forested hills. It was a wild northern landscape, bleak, harsh, inhospitable. Yet somehow I relished being alone among screaming winds and gulls, and booming surf, and groaning trees.

stared at the towering little island I had glimpsed. Its cliffs rose sheer from the green sea for a thousand feet. Its flat top was on a level with the mainland, and separated from it only by a narrow, deep chasm through which the

ocean surged.

But upon the island itself rose massed gray towers-buildings! Great castles stood out boldly against the gray, tossing sky, grouped into an amazing city on the small plateau. From the island to the mainland sprang the arch of a stupendous bridge. flying bow of stone soared up and out for hundreds of feet. Painted in brilliant red and blue and vellow, it gleamed like a fixed rainbow.

A rainbow bridge, leading to the high eyrie of great gray castles! Into my mind rushed the stupefying memory of the legends I had read so recently-Asgard, the fabled city of the Norse gods-the rainbow bridge that connected their abode with Midgard.

Was I looking upon the city of the Aesir? Impossible! Yet this place was

real. . . .

CHAPTER III

Jotun and Aesir

CRY in the unhuman uproar startled me. I whirled around. A horse and rider were charging along the edge of the cliff, coming from the south.
"Good Lord!" I gasped. "Must ev-

erything be like a dream?"

The 'ider of that charging black steed was a girl, but like none I had ever seen before. She wore a winged metal helmet, beneath which her bright yellow hair streamed like flame in the wind. Blue eyes flared hatred out of a beautiful, angry face. Her dress was a gleaming brynia, or coat of ringed mail, over a kirtle. Her white knees were bare, gripping the saddle. As she urged her mount down upon me, a straight, light sword flashed in her hand.

"You dare spy upon Asgard, Jotun dog!" she cried fiercely in a language that was remarkably close to Norwe-

gian. "Death for that!"

Then that high eyrie of great gray castles was Asgard, home of the legendary Aesir! And this wrathful Viking maid took me for a Jotun, one of the race who were mortal enemies of the Aesir! Was I dreaming all this, or had I actually stumbled somehow into the land of ancient Viking legend?

Then I woke to realization of my peril. As the girl's sword stabbed toward my breast, I ducked under it. I felt the blade scream above my head as her horse thundered past. Swittly I reached up and grabbed her outstretched mail-clad arm. My hold tore

her from her saddle.

The sword flew from her grasp as she fell. But she was up and darting toward it in a single motion. I leaped after her and caught her before she could reach the weapon. She fought like a tigress. The strength of her slender, mail-clad body was amazing. Her small fist struck my mouth furiously.

"Scum of Jotunheim!" she hissed.

I finally succeeded in pinning her arms to her sides. Her white face, inches away from my own, was blazing with rage, her sea-blue eyes stormy in wild anger. She was be a u tif u1, with a vibrant loveliness like that of a tempest. Her helmeted, golden head came only to my chin, but her blue eyes glared into mine without a trace of fear. "You'll dangle from the walls of As-

"You'll dangle from the walls of Asgard for daring to lay hands on me,

Jotun!" she snapped.

She spoke a strangely antique form

of the Norwegian tongue. I answered in the Norwegian I knew.

"Why did you try to kill me?" I

ked. "I'm not your enemy."

"You are a Jotun, an enemy to the Aesir," she declared. "You have the dark hair of a true Jotun dog, even though you have chosen to dress in outlandish garments. And you dared spy on Asgard!"

In the old legends, I remembered, the mighty Aesir had been fair-haired. Their mortal enemies, the Jotuns, had

been dark-haired.

"I am no Jotun," I said earnestly. "I have but newly come to this land, from

far across the outer ice.'

She laughed scornfully. "Do you think I believe that you have come from beyond frozen Niffleheim? Your lie is not even clever. Why do you delay in killing me? Death is preferable to your touch, Jotun. And the death of Freya will soon be avenged."

"Freya?" I gasped.

This girl was Freya, whom the old Vikings had worshiped—Freya of the white hands, loveliest of the Assir? It was impossible! She was real, warm, panting with hate as she sought to free herself. Yet she had spoken of Asgard. That distant eyrie of gray castle was Asgard, just as the legends had described it, even to the flying rainbow bridge that connected it with the mainland.

CAN'T understand, Freya," I faltered, still holding her. "My name is Keith Masters. I came from beyond the ice—Niffleheim, as you call it."

For a moment, doubt softened her stormy blue eyes. Then she looked past me, and they became bitter and hate-filled again.

"You need lie no longer. Here are your Jotun comrades now, come to help

you."

I turned, appalled. Eight men were approaching stealthly, after tethering their horses at the edge of the forest. They were taller even than I. Their hair was black as mine, and hung down in shaggy locks from under capities metal helmets. They wore armor tunied of overlapping metal scales, and high buskins on their feet, and carried

sword.

swords and shields. Their faces were black-bearded, brutal,

"He is the man-kill him!" a brawny man bellowed, pointing to me with his

They rushed forward. Freya's sword lay near my feet. I released the girl and snatched up the weapon. I faced the Jotuns, I glimpsed Freya staring in wonder from me to the charging barbarians. I heard their captain

shouting orders. "Strike them both down. Be sure

the man does not escape!"

They came at me in a bunch. The light, straight sword in my hand flashed out viciously. I was a fair hand with a saber, for it was a sport I had practised in university days. Except for its straightness, this sword was like the blades I had used.

It bit through a Jotun throat, then swung in a slicing slash at his nearest comrade's neck. Both men crumpled, but the others came on. I knew I was done for. Real life isn't like the movies. One man just can't stand off six in a sword fight.

"We are at the edge of the cliff," Freya said calmly. "Another step

backward and we fall."

"Take care not to push the man over the cliff," shouted the Jotun captain apprehensively. "We must not lose

his body!"

Whatever its reason, their caution gave me a chance I would not have had otherwise. I stood up against their stabbing blades, fending off savage thrusts. But such a battle could not go on for long. Already my arm was tiring, and I was exhausted by all I had gone through.

"He weakens!" roared the Jotun captain. "Thrust home!"

At that moment, I heard a thunder of

approaching hoofs. "Help comes!" Freva cried.

kinsman and the Jarl Thor!"

The Jotun warriors stopped and swung around. A bellow of rage and terror went up from them. Two riders were charging toward us from Asgard, followed by a hurrying troop. One was a helmeted, gold-haired man, whose handsome face was wild with anger. The other's red face and small eyes were blazing. His yellow beard bristling, he swung a huge hammer that to me seemed his only weapon.

"The Hammerer!" cried the Jotuns.

THEY bolted in frantic fear toward I their horses. But they were too late. A terrible bull-roar of rage came from the bearded, bare-headed giant. His huge hammer smashed a Jotun's helmet and skull like cardboard. Without slackening his horse's stride, the gigantic Hammerer swung his awful weapon at another Jotun's head.

"It's the Jarl Thor and my kinsman

Frey!" Freya stated coolly.

Thor, mightiest of the old gods of legend, strongest of the Aesir? Frey, the mythical kinsman of Freya? shrugged in defeated skepticism.

None of the fleeing Jotuns reached their horses. The lightninglike sword of Frey stabbed two as they ran, and the terrible hammer of bearded Thor smashed down the others. Then Thor and Frey wheeled their horses. The Hammerer uttered another roar of rage and spurred straight at me.

"Here's a Jotun dog we missed!"

Before I could move, his great hammer, bright-red with new blood, was already raised. I swaved drunkenly, exhausted, unable to defend myself from that terrible weapon.

"Wait!" Freya cried.

The hammer was checked in mid-air. No ordinary man could have halted its downward rush so effortlessly.

"Is he not one of the Jotun skrellings who attacked you?" rumbled Thor.

"He cannot be," Freya said, they tried even harder to kill him than me, and he fought valiantly against them."

Frey hurriedly dismounted. handsome face was drawn with worry as he ran to the girl and caught her shoulders.

"You're not harmed, Freya?" he

asked anxiously.

"No, by the help of this outlander," she said. "Jarl Keith is his name, and he says he came from beyond Niffleheim.

"It's true," I panted. "I came in that

flying ship.'

I pointed to the beach far below. where my rocket plane rested between boulders. They stared down at it.



Diving close to the storm-cones, I dropped four bombs (Chap. XVIII 23

"So you outlanders can build flying ships," Frey said wonderingly. "Your civilization must be far different from ours. Odin will wish to question this outlander. We'll take him to Asgard with us."

Odin, chief of the old Norse gods, king of the mythical Aesir? I shook my head and gave up the fight against

"Very well," growled Thor reluctantantly. "I still think he looks like a Jotun."

Frey brought me the horse of a dead jotun. By now, the troop that had hurried after Frey and Thor reached us. They were all big, fair-haired men, armored in mail brynjas and helmets, obviously disappointed at missing the

fight.

I mounted, unable to lose the dreamlike quality of the experiences. With the troop of horsemen following, I rode beside Freya, Thor and Frey. I heard the clatter of hoofs, the rumble of voices, felt the saddle beneath me, and the motion of the horse. But nothing seemed real. My body grasped the actuality, yet my tired, harried brain refused to accept it. My eyes were so puzzled and shot with blood that Freya looked at me sympathetically.

"You can rest in Asgard, Jarl Keith," she said. "And you have nothing to

fear from my people."

"I do not fear," I answered thickly, "but my dazed mind makes me unhappy. Are you people really the old gods?"

"Gods?" she repeated. "I do not understand you, Jarl Keith. There are no gods except the three Norns and their mother, Wyrd, the fates whom we worship."

CLENCHED my teeth and stared straight ahead. If they ween't the ancient Norse gods, why did they give themselves, their city, the lands around them, the names I had found in the legends? On the other hand, it couldn't be a fake, for they seemed genuinely bewildered by me and my questions. Naturally they might have been fairly recent immigrants to this weird blind spot, perhaps the tenth or fifteenth generation. In that case, they wouldn't be immortals, of course, and there would

be a perfectly reasonable explanation for their names and those of their city and surroundings.

But would recent colonists dare the vengeance of their gods by taking their names? I had to change that question when another thought struck me. Even if the colony were thousands of years old, there would still be some remembrance of the Aesir—the old gods! But these people worshiped the Norns and their mother, Wyrd, which meant they were not gods and did not regard the

Aesir as supernatural beings!

Defeatedly I stopped thinking when we reached the rainbow bridge. Five hundred feet long, it consisted of brilliantly painted slabs of stone, laid across two huge arched beams of massive, silvery metal. Far beneath this giddy span, the green sea rolled between the promontory and the island, Asgard. My hair stood up in fright as we rode our horses up the arch. Their hoofs clattered on the stone, proving the solidity of the bridge. But I shrank from looking over either side, for there were no railings or low walls. But neither the Aesir nor our horses showed apprehension.

Bifrost Bridge hung in the sky like a rainbow frozen into stone. And I, Keith Masters, with Thor, Frey and Freya of the old Aesir, was riding across it into Asgard, the mythical city of the gods!

CHAPTER IV

Odin Speaks

THE bridge ended in a massive guard-house of gray stone, built sheer on the precipitous edge of Asgard. The only entrance to the city beyond was by an arched way through the fort, which was barred by metal gates. But as our horses clattered over the stupendous bridge, a guard blew a long, throbbing call on a great horn that hung in a sling.

Our horses paused. Warily I glanced down into the abyss and looked at the island more closely. I noted that in the eastern cliffs was a deep ford with a narrow entrance, in which floated several dozen ships. Dragon-ships like those of the old Vikings, they were forty to eighty feet long, with brazen beaks on their bows and sails furled and oars stacked. From the fiord, a steep path led upward to the plateau.

In answer to the blast on the horn, a tall, lordly man in gleaming mail and helmet came out on the tower above.

"Open wide your gates, Heimdall!" boomed Thor impatiently. "Are we to be kept waiting here till we rot?"

"Softly, Thor," Frey said to the Hammerer. "It was Heimdall, remember, whose keen eyes saw Freya and the Iotuns and warned us."

Heimdall, the warder of the guardhouse, waved his hand to us. Winches groaned, and the barred gates swung inward. We spurred forward. I was glad to leave that unrailed bridge over the abyss. We rode right through the arched tunnel that pierced the guardhouse, and clattered onto a stone-paved plaza.

Asgard lay before me.

Involuntarily I slacked my bridle and stared at the great gray castles that were built in a ring around the sheer edge of the lofty island. All twenty had been built of gray stone hewn from the rook of the island itself, and all were tiled with thin stone slates. Each consisted of a big, rectangular, two-storied hall, with two branching lower wings and two guard-towers. They faced toward a far huger pile that rose from the center of the island.

The largest castle had four guardtowers, and its vast, stone-tiled roof loomed over the rest of Asgard like a man-made mountain. Between this great hall and the ring of smaller castles lay small fields and cobbled streets of stone houses and workshops.

Hundreds of the people of Asgard were in the streets and fields. All were fair-haired, blue-eyed and large-statured. Many of the men wore helmets and mailed brynjas, and were armed with sword, ax or bow. Other men wore metal rings around their necks, but they went about their tasks cheerfully enough. The women wore long blue or white gowns, with wimpled hoods. There were scarcely any children.

"Must be an unbelievably low birthrate here," I muttered. "That could be due to the hard radiation effect." The faint, eldritch green glow pervaded this island, like the mainland. It was certainly exhilarating. It was restoring my vigor with amazing speed. But if it was actually gamma or a similar hard radiation, as I suspected, it would be bound to cause a partial sterility among people who were continually exposed to it.

We spurred toward the central castle, halted our horses on a stone plaza

guarded by a file of soldiery.

"This is Valhalla, the castle of our king," Freya told me as we dismounted. "Courage, Jarl Keith. Odin will explain all to you."

THE touch of her slim white fingers weemed to steady me. Valhalla, the legendary gathering hall of the gods, had stunned me. I grinned weakly and followed Thor as he clanked through the arched entrance and strode down a stone corridor into a vast hall.

The place was two hundred feet wide and six hundred feet long! Ninety feet above us were the great beams that supported the enormous gabled roof. Narrow, slittlike windows admitted too little light to dispel the shadows, but I could see that the walls were hung with brilliant tapestries. The stone floor held massive tables and benches.

In the center was a great sunken hearth, where a few dying brands still smoldered. Facing this, on a raised stone dais against the south wall, sat Odin, king of the Aesir. He was wrapped in a blue-gray mantle, and wore a gleaming eagle-heimet. Thor led our little group across the shadowy hall and raised his hammer in salute.

"Hail, king and father! The Jotuns dared to attack the lady Freya. Frey and I killed the skrellings, and have brought this man. He looks a Jotun to

me, but he claims he is an outlander."
Freya stepped forward, her slim figure martial in her gleaming white mail,
her beautiful white face wrathful.

"Thor is stupid as ever, lord Odin! Anyone can see this man is an outlander from beyond Niffleheim."

"Let the man speak for himself," Odin said in a heavy, rolling voice.

The king of the Aesir seemed to be

a powerful, vigorous man of about fifty years of age. His short beard was gray. His left eye was missing, destroyed by the accident or battle that had also left a white scar on his face. But he radiated such deep, stern power and wisdom that I felt like a child before him.

"You say you came from beyond Nif-

fleheim?" he asked.

"Yes, lord Odin," I answered unsteadily. "I was traveling over that icy waste in my flying ship. A storm caught me and flung me far north, toward this strange land which I could not even see until I was hurled into it."

"So the outland peoples have been learning science?" Odin asked thoughtfully. "It must be so, if they can build

flying craft."

"Yes, and I am one of the scientists of my people," I said. "Yet I cannot understand this strange land. It cannot be seen from outside. It is warm compared with the polar cold outside, and it seems flooded with some mysterious force."

"If you cannot understand these things," Odin rumbled, "then the science of your outland peoples cannot be

deep as our ancient one.

WAS more stunned than ever. The Aesir seemed utterly without modern scientific tools, weapons and instruments, yet their ruler was calmly deprecating the science of the modern world.

"I cannot understand you, lord Odin!" I burst out. "Asgard, all the Aesir, and the Jotuns have been deemed but legend for many centuries. Yet in this hidden land I find you have the names of the old gods, and have called your city Asgard. Most of all, I do not understand why you speak of the science of my race as though you knew a much deeper science. I have seen no evidences of scientific knowledge in this land at all!"

"Outlander, who call yourself Jarl Keith," Odin replied, "we Aesir are men, not gods. But we have lived for many centuries in Asgard, and many legends may have risen about us in the outer world."

"You've lived here for centuries?" I gasped incredulously. "Do you mean that you are immortal?"

"Not immortal. We can be killed by war, accident or starvation. But we do not grow old, and neither do we sicken or die of disease. We do possess an ancient science, deeper and different than your outland science.

"But because it once brought us disaster, we prefer not to encourage research in it, nor use it in our everyday lives. We Aesir were the first civilized race of Earth. For we grew to civilization in the place where life itself first evolved-beneath the crust of Earth.'

"Inside Earth?" I exclaimed unbelievingly. "Why, not one of our biol-

ogists would agree!"

"Yet it is so," said Odin broodingly. "There are great spaces beneath the crust of the planet, mighty hollows formed by its unequal cooling. It was in one of those spaces beneath this northern part of the globe that life first began. For in those hollows are great masses of imbedded radioactive elements.

'Their radiation, powerfully drenching certain compounds of carbon, hydrogen, phosphorus, sulphur and other elements, which erosion carried down into the subterranean spaces, transformed those unstable compounds into new, complex chemical compounds. They never could have formed on the Those organic compounds surface. finally formed into cells capable of assimilation and reproduction.

"A rapid evolution of those first subterranean living cells into more complex creatures took place. It was rapid because the penetrating radiation in that subterranean space affected the genes of all living things and caused a proliferation of mutants, a constant flood of new forms. Thus, the first living things, the first plants and insects and animals, were born beneath Earth's crust.

"From there, they spread out onto Earth's surface, and soon multiplied vastly. But evolution was more rapid in the subterranean spaces. For the gene-affecting radiation was more powerful there than on the surface. more mutants evolved there. So it was in the subterranean spaces that the first mammals and the first men evolved. Many of those men found their way out to the surface.

"They spread over Earth as wandering, half-animal savages who slowly developed through the ages. But the human beings who remained in the sheltered subterranean world developed far more swiftly. Those people had become intelligent when the men of the surface were still brutes. Those people in the underworld developed a great civilization and deep knowledge of science. They were my people, the Aesir.

"Generations of us lived and died in the great, hollow underground world we called Muspelheim. But then our scientific progress brought catastrophe. One of our scientists, ignoring my warnings, believed that he could enable us to live indefinitely without aging or

sickening.

"His theory was that by accelerating the natural distintegration of the radio-active substances in our subterranean world, they would emit a terrific flood of radiation. It would destroy all disease bacteria and deliver us from sickness. It also would constantly renew the cells in our bodies by stimulating their unceasing regeneration."

DIN paused, and a shudder seemed to run through all the Aesir in that great hall, Valhalla.

"Against my orders, he carried out the experiment that brought catastrophe to Muspelheim. The process got beyond his control. All the radioactive matter in our subterranean world blazed up. We Aesir fied up from our underworld to the surface. We found that the mainland yonder, which we called Midgard, was populated by two of the barbarous races of the upper Earth.

"One of those races, whom we called the Jotuns because of their great stature, were quite numerous. A people of savage, brutal warriors, lacking all learning, they dwelt in the dark city Jotunheim, which lies on the southern shore of the mainland Midgard. The other race we called the Alfings, for they were stunted men who dwelt mostly in the small caves under Midgard, through fear of the Jotuns.

"The Jotuns at first pretended friendliness toward us, and learned our language. We had taken this island of Asgard for our home, and had built our



Odin

castles here, and connected it to the mainland by the bridge Bifrost, whose beams the Alfings forged for us. Then the Jotuns suddenly unmasked their hatred and attacked us here in Asgard.

"Almost they overcame us, for to surprise was added treachery. But by calling upon our scientific powers, we repelled the Jotuns. Aghast at the dreadful forces our science loosed upon them, they gladly ceased attacking us. Yet they have always hated us, and we have lived in a hostile armed truce with

them for twenty centuries.
"Yes, for two thousand years have I

and most of my people lived here in Asgard. The terrific blaze of radioactive fire which our rash scientist kindled in Muspelheim far below drenches all this land with penetrating radiation. Even as he had hoped, it kills all disease batteria and rejuvenates our tissues. We do not sicken or age, and can live indefinitely, unless killed in war or accident. But because the radiation has a strong sterilizing effect, our number has never increased.

"The Jotuns and Alfings, who dwell in the mainland Midgard, are also kept unaging by the radiation. And it refracts all light around this land. It also causes the northern lights that stream from this place into the skies. Here in Asgard we have lived thus for all these centuries. Though we chiefs of the Aesir retain the deep scientific knowledge we developed long ago in Muspelheim, we have chosen not to delve

"Ît was such delving that brought disaster to our subterranean home. We want no more such disasters! We are content to live here in simple fashion, without depending too utterly on science. We know from bitter experience that science can be perverted to catastrophic results by reckless and unscrupulous men."

IS heavy voice ceased. I stood staring at him, my mind dizzy. Incredible as it seemed, his story was scientifically sound. It explained nearly all the enigmas I had met in this mystery land.

"You have lived here for centuries," I mused. "Dim rumors of your powers, your city Asgard, and your war with the Jotuns must have reached the outer world. These rumors became myths

that made you gods."

"It must be so," Odin agreed. "Long ago, a party of the Aesir went beyond the ice on an important mission. Some of them did not return. Now I believe those lost ones reached the outer world. They probably died soon, from lack of the rejuvenating radiation. But their stories of us may have begun those myths."

So I am thought a mythical god in the outer world, eh?" Thor guffawed.

"It is true," I said earnestly. "And also lord Odin, and Frey and Freya. But there's one thing I can't understand. Those Jotuns who attacked me and Freva seemed intent on killing or capturing me. It was as though they expected me, and were waiting to seize me. Yet how could they possibly know I was coming?'

Odin frowned. "I do not know, but I do not like it. It may be that the

Jotuns-

His voice trailed off, and he stared abstractedly beyond me. Somehow the tone of his voice had chilled me.

"But enough of that now," he said abruptly. "We shall talk later of these things and of the outer world from whence you come. Now Jarl Keith is to be an honored guest of the Aesir." "I can't claim that title," I replied.

"I am no chieftain in my own land. I'm only a scientist."

"Any man who dared Niffleheim's ice has won the title of jarl," he declared. "You shall rest in this castle. And tonight, Jarl Keith, you sit with the Aesir at our nightly feast, here in Valhalla."

CHAPTER V Shadow of Loki

SLOWLY I awoke to the realization that a hand was gently shaking my shoulder. I saw at once that it was twilight. I had slept exhaustedly for several hours in this spacious, stonewalled room. I lay on a wooden bed whose posts were carved into wolf's There were two heavy chairs with hide seats, and a big chest covered by a brilliant tapestry. Broad open windows looked out across the twilit city of Asgard.

The hand shaking my shoulder was that of a thrall. The servant, a grizzled. middle-aged man, wore the metal ring

of servitude about his neck.

"The feast in Valhalla begins soon, lord," he said as I sat up. brought you proper raiment."

He pointed to a helmet and garments such as the Aesir wore, which he had placed on the chest.

'All right, if I'm supposed to dress in the fashion," I said dubiously.

As he bowed and left, I went to the window. The rapidly darkening sky had partly cleared of storm clouds. In the southwest, a bloody, murky sunset glowed evilly crimson. The shaggy hills and ridges of Midgard stood out black against it.

Somewhere on the mainland, miles away at its southern end, was the dark city of Jotunheim. Somewhere in the caves of that rocky land dwelt the dwarfed Alfings. And far below all this land, if Odin had told the truth. lay the great subterranean world of Muspelheim. There blazed the terrific atomic radiation that made this a warm country where no man could sicken or grow old enough to die. Beneath me, as dusk fell over Asgard, I could see a cheerful bustle of activity. Armed soldiers, who had been training with sword and buckler on a nearby field, were now trooping through the twilight toward Valhalla. Smoke was rising from great castles and humble stone houses. I glimpsed hunters riding over Bifrost Bridge, the carcasses of small deer slung over their saddles. As Asgard's gates were opened, I heard the throbbing call of the warder's great

horn welcoming them.

Was it possible that I was actually here in the mythical city of the gods? It certainly was hard to believe. But even more incredible was Odin's saga. If he and the other Aesir chiefs possessed such profound scientific knowledge, why did they and all their people

live so primitively?

"I suppose it's true," I muttered.
"They don't age or grow sick, so they
can live pleasantly enough without using science. Anyhow, they had a
damned unpleasant experience with one
reckless scientist. It's no wonder they
don't encourage research." Slowly I
shook my head. "No. I'll wake up and
find it's just a dream. But I'd hate to
have it disappear before I could see
Preya again. Wonder if she'll be at the
feast."

That thought spurred me into taking off my heavy coat, breeches and boots. The helmet, woolen trunks, mail coat.

buskins, belt, and long sword and dagger looked uncomfortably like stage props. But women are funny about unfamiliar clothing. Just think how they laugh when the telenews shows them styles they wore a couple of decades ago! I didn't want Freya to have that reaction to me.

But when I took off my own shirt to don the Aesir garments, my hand touched something that hung from my neck. It was the rune key! I had completely forgotten it since entering the blind spot. Now, however, I suddenly thought of the rune rhyme.

> Rune key am I, Chaining dark evil, Midgard snake, Fenris, And Loki, arch-devil.

Why, I wondered, had I heard no mention of Loki? Everything less in the old Norse myths seemed to have some solid basis here, but I had heard nothing of the traitor Aesir. I decided to ask Odin about that at my first opportunity, as I tucked the gold cylinder inside my new shirt and laced up the mail brypia over it.

Hardly had I done so when the grizzled thrall again appeared at the door of my chamber.

"King Odin summons you to the feast, lord."

I quickly put on the heavy, gleaming helmet. Feeling stiff as a ham actor [Turn page]

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in the strange costume, I followed the thrall down stone stairs to the great hall. The thrall shouted a loud announcement.

"The Jarl Keith, from the outlands

beyond Niffleheim!"

The voices and laughter died down, and every eye turned toward me with eager curiosity. Valhalla blazed with light from torches set in the walls and the great fire blazing high in the central hearth. The scores of tables now bore metal and earthenware dishes loaded with food. Tall flagons and drinking horns were replenished by swift serving-maidens.

At these tables sat the chief captains and warriors of the Aesir. Hundreds of big, fair-haired men, helmets laid aside, their mail glistering in the torchlight, were feasting and drinking. At the table raised upon the dais by the southern wall sat the nobles of the Aesir and their ladies. In his high, carved chair in the middle sat Odin. Beside him was a woman of matronly beauty, his queen, the lady Frigga. "Jarls and captains of the Aesir,"

Odin boomed. "Drink welcome to the Jarl Keith, our guest and friend from beyond Niffleheim."

Skoal to the Jarl Keith!" roared bearded Thor, winking jovially at me as he raised his huge drinking-horn,

"Skoal!" pealed Freya's silver voice. Every voice in Valhalla hall repeated the greeting. Hundreds of drinkinghorns were raised. Odin waved me toward a seat at his table of nobles, between Freya and the delicately lovely wife of Thor. As I took the chair, serving-maids brought me a great slab of beef on a platter, and a horn of mead. I tasted the drink curiously. It was thin, sweet and potent.

Freya leaned toward me. She was dressed now like the other Aesir ladies, in a long white linen gown. Her bright hair was bound by a silver circlet, her dress belted by a heavy metal girdle studded with flashing emeralds.

"Shall I name the others for you, Jarl Keith? You will meet them all soon." At my right, beyond giant Thor and

his wife, sat three other sons of Odin-Vidar, Vali and Hermod, tall and fairhaired, stalwart men all. There was Heimdall, the warder of Asgard gate, whom I had already seen. Niord was a squat, jovial bald man of middle age, with his wife Skadi. Forseti was a sober young man, apparently much respected by the other Aesir.

To my left, beyond Freya, sat Frey and his lovely wife, Gerda. Beyond them were Bragi, a gentle-looking man with dreaming eyes, his wife, the noblefeatured Idun, Aegir, a gaunt, whitebearded old sea-king, and his aged wife, Ran. At the table-end sat Tyr, a young man but most gloomy and silent of any in the hall. Drinking moodily, he watched the merry feasters with brooding eyes.

'Tyr is always dark and silent," Freya explained, "but not in battle. He

is a berserk."

I remembered the legend of the berserks-men who went blood-mad in battle, and fought with unhuman frenzy, without mail.

"How is it that some of you are old. if the radiation keeps you all from ag-

ing?" I asked.

They were old when the catastrophe first kindled the radiation below. Since then, none of them has grown older. The few children born here grow normally till they reach maturity, and then do not age further."

"You've all lived here in Asgard for centuries on centuries," I muttered. "It

seems repulsive."

"Not all of us, Jarl Keith," said Freya. "I am not centuries old!"

HE smiled when I looked at her doubtfully.

"Your name was known and worshiped in the outer world centuries ago, Freva."

"My mother's mother was named Freya also," she explained. "She was sister to Frey, who sits beside you. She and her husband Odur were among the party of Aesir Odin mentioned, who perished in a mission beyond Niffleheim. But Freya left two daughters, Hnoss and Gersemi. Gersemi was my own mother. She perished from drowning twenty years ago, soon after I was born.'

"Then you're really only twenty years old?" I exclaimed. "I'm glad of that!"

"Why should you be glad, Jarl

Keith?" she asked quite innocently. I was spared a reply by an interruption to the feast. Tall Heimdall stood

up and called: "A saga from the king of skalds,

Bragi!"

When the feasters took up the cry, Bragi rose. Smiling, he went to a great harp at the end of the hall. His fingers touched the strings, and rippling, shivering music welled out. He sang in a clear, strong voice.

> Give ear, all ye Aesir, Sons of the morning, Wise men and warriors, Men with great hearts! Ye who fared upward, From Muspelheim's fire-hell, Daring all terrors To seek a new land!

Bragi sang on, describing the migration of the Aesir from their disastersmitten underworld, their repulse of the Jotuns, the hunt and the battle of their ships along Midgard's coast, and the fury of the sea.

"Skoal, Bragi!" roared the audience,

and all raised their horns.

I drank with the others. The potent mead made me a little dizzy. I nearly forgot I was Keith Masters. I was the Iarl Keith, sitting beside Freva in Valhalla, feasting and shouting.

Odin an-"Now for the games,"

nounced.

A gleeful yell came from the war-What games are these?" I asked.

"Sword-play with blunted blades. and wrestling," Freva said, "As a guest, Iarl Keith, you'll take part in them, of course.'

I saw everyone looking expectantly at me. Somewhat sobered, I stood up. "I'm but a fair swordsman, lord

Odin," I said, "yet I'll join in." "Who will try sword-play with the stland Iarl?" Odin asked. "Tyr, you

outland Jarl?" Ódin asked. are our best swordsman."

"No, lord Odin, not I," the berserk Tyr answered broodingly. "You know that a sword in my hand brings the madness on me."

"I'll face Jarl Keith," said Frey, standing up and smiling at me.

We walked around to the open space in front of the tables. There we were given gauntlets, shields, and two long swords whose points had been cut off.

"Who delivers three stout blows on his opponent's helmet wins the game," Odin stated.

The game appeared dangerous to me, for our faces were quite unprotected. I hadn't much hope of besting Frey. but I was determined not to show any semblance of fear before Freya and these fierce warriors.

REY'S blade clashed against mine. Next instant, I realized I could never meet his equal. Centuries of practise had made him unhumanly skillful. His blade flew like a streak of light and crashed on my helmet. As I staggered from the stunning blow, he hit my helmet again. A roar went up from the crowd. Resentment gripped me, and I lashed out savagely at Frey's head.

By sheer luck, the unexpected stroke caught his mailed shoulder. When he stumbled, I smote down on his helmet. "Well done, Jarl Keith!" roared the bull voice of Thor.

But Frey recovered before I did. His blade became a blur of steel in front of me. Grimly I tried to hold him off. But he soon got in his third blow.

"Are you hurt, Jarl Keith?" asked Frey solicitously.

"Only my pride," I said ruefully, as I put down the sword and shield.

Thor strode around the table to me. His bearded red face and little eyes were twinkling with jovial expectation.

"You look like a wrestler, Jarl from the outlands," he boomed. "Will you try a fall with me?" "Aye, a match between Thor and the

outland Jarl!" the audience shouted. "Jarl Keith hasn't rested!" Freya cried indignantly to the Hammerer.

"It's not fair!" "I'm ready," I said coolly to Thor.

I realized to the full that the chances of my overcoming the giant were infinitesimal. But I realized, too, that all this was a kind of hazing which these Vikings gave to any newcomer. Thor tossed aside his hammer. We faced each other, hands extended, seeking a grip.

I was a fair wrestler, and I knew that my only chance was to overcome Thor by a quick trick that he might not know.

As the giant grabbed for me, I slipped past him. Leaping to his back, I got a half-nelson on him before he could expect it.

A mighty shout went up from the watchers as they saw the Hammerer claw furiously to pull me loose. Furi-

ously I hung on.

With one sturdy arm against the back of his heavily cabled neck, and my legs braced, I strained to force his huge head downward. For a moment I thought I had a chance to win the the match. Then a bull-roar of rage came from Thor.

He jerked his head upward with such tremendous force that my hold was

torn loose.

IKE an enraged bear, the Hammerer whirled and caught me around the waist.

This was wrestling in his style, all strength and little science. His huge arms crushed me, though I exerted all my strength to win free. I felt the lacings of my mail coat burst under the pressure as I strained frantically to break his hold. But he picked me up like a child and slammed me down upon the stone floor.

"Well done," he roared as he let me go. "You almost conquered me with your outland tricks, Jarl Keith. You will have to teach them to me."

"Some other time," I gasped, panting for breath as I stumbled to my feet. I turned toward the king. "If you are satisfied, lord Odin, I'll take part in no more games now."

Odin smiled. "You have borne yourself well, Jarl Keith, and—"

His voice ceased as his stern face

seemed to freeze.

When I saw that he was staring at

my chest, I looked down. The bursting mail coat had let the rune key dangle in full view.

"The rune key!" he whispered.

Everyone in great Valhalla was speechless, staring in horror at the ancient gold cylinder that hung outside my coat.

"The rune key!" Odin repeated hoarsely. "It has come back to Asgard. This is the day for which dark Loki has waited!"

CHAPTER VI

Ancient Science

THE frozen stillness in Valhalla was papalling. Aesir nobles and warriors all seemed turned to stone as they stared at the golden cylinder hanging from my neck. I could hear the torches guttering, the snap of logs on the blazing hearth, and the dull moan of the sea wind around Valhalla's lofty caves. It was as though the feast of the Aesir had been smitten by chill terror.

"Where did you get that key, Jarl Keith?" Odin asked me hoarsely.

"Why, my comrades fished it out of the sea beyond the ice-pack—beyond Niffleheim," I answered bewilderedly.

A deep groan went up from the entire gathering. I turned to them unhappily, feeling like a hunted animal that knows it has done no wrong, yet still is persecuted.

"Why did you bring it into this

land?" Odin demanded fiercely.

"I don't know," I blurted. Remembering the queer alien hunch that had made me find the key, I added: "Some strange whim in my mind told me where it was and warned me not to throw it away."

"Loki's work!" Odin whispered.
"The evil one has cast forces abroad
that have brought back the rune key

that will set him free.'

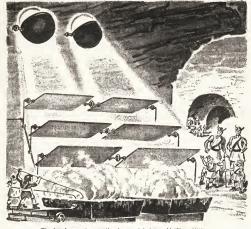
Thor's face flamed crimson as he sprang to his feet, clutching his mighty weapon.

"The arch-traitor still seeks to ruin Asgard and the Aesir!" he roared in overpowering rage. "Oh, that I could bring Miolnir down upon his skull this moment!"

"Even your strength and mighty weapon would fail against the dark science of Loki," Odin said somberly.

I looked down bewilderedly at the gold cylinder hanging on my chest. Into my mind flashed the last lines of the rune-rhyme graven on it.

> While I lie far, The Aesir safe are. Bring me not home Lest Ragnarok come.



The dwarfs were transmuting base metals into gold (Chap. VIII)

Those lines seemed to throb in my mind like a beating drum of black, dire menace that cannot be seen yet can be felt.

"I do not understand, lord Odin," I faltered. "Have I done wrong in bringing this small and apparently harmless key into your land?"

"Because you brought it," Odin stated, calm at last, "we are threatened with doom. A terrible menace has been a shadow over us for all these long centuries. That is the key which alone can loose the evil traitor Loki, who long has been prisoned."

WHEN he saw me pale at his words, his deep, heavy voice rumbled comfortingly through the frozen silence.

"It is not your fault, Jarl Keith. I see it all now. It was Loki's power that brought you and the rune key here.

Yes, from the gloomy prison where his body lies helpless, Loki's mind reached forth through his deep craft of scientific powers. He caused you to fish that rune key from the sea, and raised the storm that blew you hither. Aye, and it was to take from you the key that would free their dark lord that the lotuns attacked you when you arrived."

"But who is Loki?" I asked bewilderedly. "In the old myths of the northland, there was a tale of a traitor by that name, who sought to destroy you..."

"Aye, a black traitor was accursed Loki!" shouted Thor. "The shame and the curse of the Aesir, since first he was born."

"Aye, traitor he was, indeed," said Odin somberly. "Yet long ago, when we dwelt in the underworld of Muspelheim, Loki was the most honored of the Aesir, next to myself. Handsome. valiant, cunning, and learned, he was second only to me among the Aesir. But Loki, the greatest scientist of my people, longed for power. His experiments endangered us all, time and again. Finally, against my orders, Loki brought catastrophe on our great and lovely underworld."

"Then Loki was the scientist you told me of!" I exclaimed. "He kindled the atomic fires of Muspelheim and nearly destroyed you!"

Odin nodded, "Loki was that rash scientist of whom I spoke. Seeking to kindle a radiation that would keep us ever young, he touched off atomic fires that engulfed Muspelheim and forced us to flee to this upper world. I should have punished Loki then for his reckless disobedience. But I did not, because the flood of radiation would keep us almost immortal in this land. Instead I warned him that nobody must tamper further with the raving atomic fires below.

"Loki agreed to tamper no more with those a wful forces. But his promise was worth nothing. Secretly, here in Asgard, he traveled back into fiery Muspelheim, and began experimenting again. He hoped to forge such tremendous weapons from those forces that he could displace me as ruler of the Aesir and conquer all Earth. My son Baldur discovered Loki's forbidden researches in deep Muspelheim. To prevent Baldur from exposing him, Loki slew him. But he had already exposed himself.

"Loki fled from Asgard. Taking with him his two hideous pets, the wolf Penris and the Midgard snake, he fled to dark Jotunheim. There he allied himself with the brutal Jotuns. He knew they hated the Aesir, so he incited them to attack us, promising that with his scientific powers, he would help them conquer and sack Asgard.

"That was the time of which I told you, Jarl Keith, when surprise and treachery almost enabled the Jotuns to conquer us. The Jotuns, led by Loki and aided by the hellish forces his science devised, would have overcome us had I not used my own scientific powers to defeat Loki's and had we not all fought valiantly. We repelled the Jotuns with great slaughter."

THOR grinned and nodded, but his giant face reddened with hatred as Odin continued.

"Defeated, Loki fled with his wolf and serpent into the labyrinth of caves in Midgard. We followed him to the cave in which he hid, but Loki, in this extremity, bargained cunningly for his life. Loki called out to us: 'I have an instrument which can destroy all Asgard and the Aesir, by loosing the sea upon the atomic fires of Muspelheim. Unless you agree to spare my life, I will use that secret and you will all perish with me.'

"We agree then to spare your life, Loki,' I answered. 'You have our pledge, if you surrender that deadly instrument.' Loki surrendered the instrument to me. And then I told him: 'We agreed to spare your life, Loki—but that is all! Though you shall remain alive, you will no longer be a menace to us, for we shall prison you tecrnally in this cave to which you field.'

"And we did that to Loki, Jarl Keith. We cast him into a state of suspended animation by filling his cave with a gas whose scientific secret I had discovered. That gas paralyzed the functions of the body by freezing, but left the mind conscious as ever. Into that waking, frozen sleep we cast Loki and his two hidcous pets. Then we closed that cave forever with a door that was not of metal or stone, but of invulnerable force.

"That wall of energy was a screen of vibrations controlled by the generator inside a tiny projector. You, Jarl Keith, have that projector—the rune key! Only the rune key annote the door of Loki's cave-prison. Until it is unlocked, Loki must lie there with his two dreadful familiars in suspended animation.

"But though Loki's body lies frozen, his mind is awake and active, and he seeks by mental forces to free himself. We had given the wardership of the rune key to Odur, husband of Freya, one of our greatest jarls. Loki's mind worked from afar upon Odur by telepathic command, attempting to force the keeper of the key to release Loki.

"Fearing that Loki's telepathic orders might some day succeed, I commanded Odur to take the rune key and travel to the great ocean far outside icy Niffleheim, and fling it into the deepest sea. Then, I thought, Loki would not be able to bring the key back into Asgard, and would never manage to escape his doom. Odur took the rune key and went beyond the ice of Niffleheim, and flung the key into the occan as I

"But before he could return across the ice, Odur and his wife Freya and their party were lost. I think now that they reached the lands of your outer world, and that their tales of the Aesir and Asgard started the myth you mentioned, Jarl Keith. But we thought ourselves safe, with the rune key resting in the ocean deeps far outside Asgard.

There wen did a stranger chance to find the key in some future day, the runes upon it would warn him. In case he could not read the runes, the key was constructed to telepath a constant thought message. He would receive a constant mental warning to get rid of

the key."

"So that's why I felt that sensation of ominous warning, after I first touched the key!" I muttered,

"That is why," Odin replied gravely.
"And yet you, Jarl Keith, were influenced by the even stronger commands of Loki. You kept the key, and brought it back into Asgard. And now Loki, through his allies, the Jotuns, will seek to get the rune key from us, to use it to free himself. And if Loki is ever freed again, he will lead the hosts of Jotunheim once more against Asgard. And it might well be that Asgard falls, that the Aesir perish!"

I LISTENED in horror. Not for a moment did I doubt Odin was telling the truth. The ancient science of these Aesir, though neglecting mechanical discoveries for which they had little need, had clearly surpassed us in the study of the subtlest forces of the Universe.

Yes, I knew now what the two contending, alien voices in my mind had been. The constant telepathie warning of the rune key projector itself—and the more powerful mental command of dreaded Loki!

"I did not know, lord Odin," I declared with sincere regret. "Had I dreamed that the rune key was what it really is, I'd never have brought it here."

"You had no way of knowing, Jarl Keith," he answered. "And the attempt of Loki has failed. The Jotuns he sent to take the key failed in their task, and we still hold it."

I took the little gold cylinder from around my neck and handed it to him. The instant I parted with it, I felt relieved of that throbbing, warning sensation which had incessantly oppressed me. Odlin took the key. While all in Valhalla watched, he solemnly handed it to wide-eyed Freya.

"Your grandfather was keeper of the key, Freya, and the office descends to you," the Aesir king stated. "You shall hold it until we take council and decide what to do with it."

"Couldn't you just destroy the

thing?" I asked.

Odin shook his head. "You know little of our science, outland Jarl. The projector in the rune key maintains the energy screen that bars Loki's cave-prison. Destroying the key would destroy that screen. Let no fear enter your hearts, men of the Aesir. Loki is still prisoned, and shall remain so. Not yet has the hour come when the evil one shall escape."

A fierce roar of shouts crashed from the throng, as their swords and axes flashed high in the torchlight.

"Our swords for Asgard!"

"It is well," Odin said with somber pride. "Now let this feast of ill omen end. Heimdall, keep closest watch on Asgard's gates tonight. Loki's mind knows the key is here, and he might telepathically incite the Jotuns to attack us and secure it. And you, Frey, see that your castle is well guarded, to protect your kinswoman and the kee."

Freya stood fingering the cord of the rune key. She looked at me with wordless, troubled appeal as she left. I fol-

lowed her into the night.

The eldritch faint green glow of the streaming, tingling radiation clung to the towering castles. No aurora was visible, for that streamed up outside the blind spot. A haggard Moon was shining through flying storm clouds. The driving north wind wailed keen and cold. From far below came the

dim, distant booming of the surf as the stormy ocean dashed against the cliffs. Freya turned toward me, her eyes dark and big.

"Jarl Keith, I am afraid!" she whispered. "I, who never knew fear before, am fearful now. If Loki is loosed—"

"There's no chance of that, while you and your people hold the key," I encouraged her. "And even if he were set free, he is only one man."

"He is evil itself." She shuddered. "I never saw Loki. Long centuries before my birth, he was prisoned. But I have heard the tales of the other Aesir. I know that, in their secret hearts, they still dread Loki and his dark powers."

SHE was trembling like a windshaken leaf. I put my arm protectingly around her, and she shivered closer to me in the moonlight. Even the dread that I, too, was feeling could not keep my blood from racing as I looked down at her lovely face. Freya of the White Hands, daughter of the goddess of long ago, Viking maid of the Aesir—I held her in my arms!

I kissed her. As I held her close against my mail coat, the chill wind blew her bright hair across my face.

"Jarl Keith!" she whispered wonderingly.

"Freya," I breathed, "I have never loved any woman before, and I never met you until this day. But now—"

She did not answer me with words. She put her small, strong hands behind my head and drew my lips down again to hers. I felt strangely shaken when I raised my head again. We heard a cough. Frey stood in the pale light near us, regarding us with a half-smile.

"I'll go with my lady Gerda to our castle, kinswoman," he said gently. "No doubt the Jarl Keith would be willing to escort you thither."

When he and Gerda had gone, we followed slowly. My mailed arm was around Freya's slim waist as we walked through the silent, moonlit streets of Asgard. She led me toward the castle on the eastern edge of Asgard. Behind us, Valhalla towered wast and gloomy against the stormy sky. Far to our left gleamed the incredible arch of Bifrost.

"Beloved, I feel armed now against even Loki," whispered Freya happily. "And I fear only that this is a dream from which I shall awake," I breathed.

We were approaching the dark bulk of the castle that crouched squat and massive on the sheer cliff. A half-dozen blond Aesir warriors were approaching us in the moonlight. When they were but a few yards from us, they suddenly drew their swords. Their leader called to them in a fierce undertone.

"That is Freya. She has the key.

Seize her, and kill the man!"

CHAPTER VII Ambush!

THEY sprang toward us. Though stupefied by the sudden treachery of Aesir warriors, I retained enough presence of mind to draw my long sword. I pushed Freya saide, struck up a blade that was stabbing at my face. My sword sliced deep into the warrior's neck. His helmet rolled off as he fell, and his yellow hair came off with the helmet!

"These are Jotuns!" I shouted to Freya. "Run and give the alarm!"

I heard her cry pierce the night, but she did not run. A sword-point grazed my shoulder, through my mail. The sting made me yell with rage, and I flung myself at the disguised Jotuns. My whirling blade cut away half the face of one. Another reeled back, clutching an almost severed arm. Then two blades crashed down on my helmet, and I collapsed to the eround.

As I fought to rally my senses, I glimpsed the disguised Jotuns dragging Freya, struggling like a wildcat, toward the cliff. The last thing I remember

was trying to rise. . . .

The next I knew, I was being pulled to my feet. Thor was supporting me, and Frey was examining me with desperate anxiety. Torches flashed as men poured from the nearby castle.

"What happened?" roared the Hammerer. "Where is the lady Freya?"

"Jotuns!" I gasped. "They got into Asgard, disguised as Aesir. They were after the rune key, and must have seen Odin give it to Freya. They seized her and took her that way."

I pointed to the cliffs.

"The stair down to the harbor!" Frey cried. "They must have come in a ship!"

As they rushed forward toward the cliff-edge, I staggered after them. My head still ached from the shock of two swords clashing on my helmet. At the edge of the cliff was the narrow stairway, chiseled down the solid rock of the precipice to the fiord below. Two dead Aesir warriors who lay on the stair showed what had become of the guards. Thor started down the steps, but Frey's heart-stopping shout halted him,

"Look! We are too late!"

Out on the ocean, a ship was forging southward through the raging waves. its sail taut in the screaming winds. It was heading straight along the precipitous coast of Midgard. Swiftly it vanished beyond the cliffs.

"The Jotuns and Freya!" moaned ey. "They have her and the rune key. Now they can loose dark Loki and bring destruction on Asgard!"

THOR shook his great hammer in terrible rage.

"Loki's work!" he roared savagely, "It was the arch-traitor who put the thought of that cunning ruse into the heads of the Jotuns, by his telepathic tricks."

"Are we just going to stand here?" I cried wildly. "They've got Freya, as

well as the rune key."

It was Freya I was thinking of in that moment, rather than the key, Though the key might loose Loki and bring about the final attack on Asgard which the Aesir feared, that possibility was less dire to me than the threat to Freya. To have her snatched from my arms in this very hour when I had won her love! I felt a red fury that made me long to destroy every Jotun in payment for any harm they might do to the Viking maid I loved.

"We can overtake them if we're quick," said Frey. He swung around to the Aesir warriors who had come running from his castle. "Down to the

harbor!

At top speed, we ran down the narrow stairway in the cliff. Thor led. with Frey and me close behind the Hammerer, and a score or more of warriors following. The Moon shone out



from behind the flying storm clouds. It lighted our way down the dizzy path that the Aesir had hewn to their harbor. The steps were no more than four feet wide, and there was no protective rail of any kind.

The shouting wind that buffeted us threatened to hurl us off the steps. Below, the black sea thundered, smashing the white foam of bursting waves against the cliffs of Asgard. As we neared the bottom, the steps were so wet with spray that our feet almost slipped from beneath us. Where the stairway ended on the rock ledge that rimmed the harbor, three more Aesir warriors lay dead in their own blood.

"The Jotuns dared do this!" bellowed Thor, his red face dark with rage in the moonlight.

"My own ship!" Frey was shouting above the howling wind to his men.

"Cast loose the moorings!"

Dozens of dragon-ships floated in the deep, narrow fiord between the cliffs, moored to iron rings in the ledge. The craft into which Frey leaped was seventy feet long, undecked, and with seats for twenty rowers. Its brazen prow gleamed like a live metal monster. We followed him as the moorings were

loosed. The yelling warriors sprang in, taking their accustomed places. Frey grasped the tiller. I stood beside him, while Thor climbed into the bow.

"Push off!" Frey shouted over the roar of breakers. "Up sail!"

cles to fend off with long oars. The dragon-ship shot out of the protection of the flord, into the open sea. Great waves lifted us sickeningly, threatening to hurl us back against the cliffs. But the square, painted sail rose at that moment, as Frey's men frantically pulled the ropes. The wind swung our heavy craft away from the looming cliffs.

The brazen prow buried itself in dark water and came up dripping as vast black waves smashed and lifted us. Cold salt spray dashed our faces. Through the roar and swing of the storm-piled sea, the ship strained southward with increasing speed. The high cliffs of Asgard dropped behind. I glimpsed torches flaring around Valhalla castle as the alarm spread.

We surged past the strait between Asgard Island and the mainland, Midgard. Far overhead, on our left, gleamed the arch of Bifrost Bridge. Then Asgard and Bifrost dropped from sight behind us as our speed quickened. We shot along the mighty cliff coastline of Midgard.

"Can you see them, Thor?" Frey called anxiously to the yellow-headed

giant.

His beard glistening with spray as he stood in the plunging and rising bow,

he stood in the plunging and rising bow, Thor was peering ahead. "Not yet!" the Hammerer roared

back against the howling wind.
"What will they do with Freya?" I

cried.

Frey shook his head. His handsome face was drawn and desperate beneath his gleaming helmet as he shifted the tiller.

"What will they do to us all, Jarl Keith, if they succeed in using the key to loose Loki? That devil will lead the hosts of the Jotuns in the last terrible attack on Asgard."

"It is all my fault," I said bitterly.
"If I had not brought the rune key with
me, this never would have happened."

The flying clouds had again obscured the Moon, and black shadow shrouded the stormy sea. Close on our left rose the sinister cliffs of Midgard, soaring sheer from the water. Frey was keeping our ship hazardously near the precipices, to lose no time in the pursuit. So close were we that each mountain-ous wave threatened to capsize us. The howling winds were bitter cold, freezing the salt spray on our faces. Each time the ship buried its brazen beak in the waves, we shipped water, and Frey's warriors were bailing furiously.

A high black promontory jutted from the cliffs ahead, and Frey swung the rudder to carry us outside that rocky point. As the ship heeled around in answer, a smashing mass of icy water almost tore both of us away from the helm. Then we rounded the point, and the Moon broke forth again.

"There they go!" roared Thor's great voice from the bow as the giant Aesir pointed with his hammer.

AR ahead on the wild, moonlit waters, a single ship was flying south along the ominous coast.

"They're heading straight for Jotunheim!" Thor shouted. "We can catch them—"

"Ware ambush!" yelled one of our warriors at that moment,

Simultaneously a shower of arrows rattled down like hail into our craft, instantly killing two of our men. I swung around, appalled. From behind the sharp rock point we had just rounded, a dozen long-ships were darting like ravenous monsters toward us, propelled by bending oars. They were Jotun ships, crowded with huge, blackheaded warriors and rowers. Their archers loosed another shower of arrows the instant we discovered them.

"A Jotun ambush!" shouted Frey, swinging the tiller hard. "They knew we'd follow. They waited here for us!" "Port helm, or they'll grapple us!" bellowed Thor.

bellowed Tho

It was too late. Next moment, the carved beak of the foremost Jotun ship hit our starboard side with a shock that sent us all staggering. As I scrambled up, I saw steel hooks fly over our gunwale and bite deep into the wood.

"Out swords and cut free!" yelled

Frey. I rushed with Frey, stumbling to the side where yelling Jotun war-riors were boarding us. We met them at the head of our own men. Swords and axes clashed in front of my eyes. I glimpsed a hairy, brutal face raging toward me behind an upraised ax. Crouching, I thrust hard, felt my sword rip between the lacings of a mall bryn-ja, and bite past into unresisting bone and muscle.

Thor reached our side. Bellowing, he whirled his hammer and crashed it down on Jotun helmets, smashing

them and the skulls inside.

Our ship was still being drawn southward by the wind that filled its sail, dragging the Jotun craft that had grappled us. The other Jotun ships were straining oars and sails to grapple with us. The roar of waves under the shuddering ship was drowned by the clash of sword, ax and the terrific clang of Miolnir as the huge hammer crashed down on helmets. Over all rose Thor's terrible battle-cry.

The flat of a Jotun ax struck my shoulder and sent me to my knees. A sword in the hand of a yelling enemy gleamed high above my head. I gaped up, helpless. But Frey stabbed in like a striking serpent. He helped me to my feet as the screaming Jotun toppled

overboard.

But a second Jotun craft had maneuvered alongside us. Enemy soldiers were hurling grapples over our port side. Frey sprang to cut them loose, before the hostile reinforcements could board us.

"The Hammerer! Kill the Hammerer!"

SHOUTING Jotuns leaped upon Thor's towering form like dogs trying to pull down a bear. Miolnifashed in his hand, almost a thing alive. But two axes crashed on his helmet and he fell, stunned. I was seeking to cut the grapples of our first attacker. My sword slashed the hide ropes. As the Jotun ship was drawn away from us by the waves, I heard a choking cry of despair.

I swung around. Frey had cut the grapples of the other Jotun enemy. But the wild lurch of our ship as it was freed had thrown him into the black waters.

He was helplessly sinking, weighed down by his heavy mail coat. Instantly I tore off my own mail coat, flung it away, and dived from the back rail into The icy shock of waters the sea. smashed the breath from my body. As my head broke the surface, I saw the battle that had been carried onward hundreds of yards. The Jotun ships were trying to get their grapples on the Aesir craft again. But the Aesir warriors were dismayed by the stunning of Thor and the loss of Frey. They had swung their ship around and were fleeing back toward Asgard.

I trod water amid the surging waves, looking for Frey. When I glimpsed him going down again, a dozen yards from me, I battled the raving wind and crashing sea until I reached his side. Diving deep, I caught him and pulled him to the surface. It was almost more than I could do to keep him afloat, weighed down as he was by his mail and sword. Now I began to regret taking along my own sword, for it was hampering me. The waves were running mountainously, bearing us in toward the looming cliffs that bulked ominously loss.

"Leave me!" Frey choked above the roar of the sea. "Save yourself, Jarl Keith—or we'll both perish."

"Cling to my shoulder-kick hard

with your feet," I panted.

His weight threatened to drag me under at any moment. I fought to swim away from the cliffs, but I was like a child in the relentless grip of those great waves.

Then I glimpsed a little beach that indented the cliffs. I recognized it at once. It was the beach where I had

landed my plane!

"This way!" I cried to Frey. "We'll be shattered on the cliffs unless we can

get to that beach."

The breakers threatened to drag us north of the little sandy indentation. I put my last ounce of strength into swimming obliquely across the thunderous waves. But those boiling breakers carried us resistlessly toward the looming cliff. We were going to be flung against it—

I yelled to Frey and made a convulsive effort. We barely cleared the cliffs, and were washed up to safety on the

beach!

CHAPTER VIII

World of Gnomes

OR some minutes we lay on the sand. Though the roaring waves broke over us, neither of us was able to move. Gradually our strength returned. and we dragged ourselves farther up the beach. Frey sat up and panted a question.

"Was Thor slain? I saw him fall as I was hurled into the sea."

"He was only stunned, I think. The men of your ship got it free and fled back toward Asgard."

"I owe you my life, Jarl Keith." Frey's voice throbbed in the darkness. "I was sinking in the waves when you leaped after me. I'll not forget that debt."

I staggered to my feet.

"It's more important that we go after those Jotuns, and rescue Freya and the

"By now," muttered the Aesir noble hopelessly, "they must be near Jotunheim. We couldn't overtake them even if we had a ship.'

"I can overtake them in a few minutes," I said grimly. "You Aesir may know a lot about atomic fires and subtle forces, but you don't know airplanes. Mine is moored right on this beach."

"Your flying ship?" he gasped. "I had forgotten about it. Is it swift enough

to overtake the Jotun ships?" "Swift enough?" I repeated. "Wait till you get in it. Maybe it'll make you think a little more highly of my

science." I hastened toward the two great boulders between which I had moored my plane. It was gone! The tracks in the sand showed that it had been dragged down to the water.

"Someone's stolen my ship!" I

groaned.

"The Jotuns must have done it. Whoever sent them to kill or capture you, Jarl Keith, sent other warriors later to seize your flying ship.'

"They must have dragged it down and pulled it aboard one of their biggest ships," I muttered, "Now we don't have a chance of overtaking Freya's captors before they reach Jotunheim." "Aye, I fear that all is lost," Frey sighed. "Now that the Jotuns have Freya and the rune key, the Jotun king Utgar will hasten to release Loki from his prison-cave. And once Loki is free and conspiring again with the Jotuns, it will be doom for all Asgard and the

My natural inclination was to hasten by the fastest method to Jotunheim, in an attempt to rescue Freva. But I realized that I owed my first duty to the cause of all the Aesir. It was I who had unwittingly brought the rune key that might loose Loki on them.

"Frey, tell me. Where and how far from here is the cave in which Loki is

held prisoner?"

"It is miles to the south, deep in the labyrinth of caves that lie under Midgard," he said bewilderedly. "Why do vou ask?"

"If you and I hurried to the door of Loki's prison and waited there," I explained eagerly, "we could be there when the Jotun king came to release Loki. We could strike Utgar down and take back the key before he could release that devil. And then, with the key safe, we could find a way to get Freya out of Iotunheim." Frey was startled by the boldness of

my plan.

"It is a daring scheme," he breathed, "and I do not crave to go near Loki. Yet it might succeed. It might prevent

"How can we get to that prison-cave before the Jotuns get there with the rune key?"

"There's but one quick way-through the tunnels of the Alfings," Frey declared.

"The Alfings? The dwarfs who live in the caves under the mainland?"

"Yes, Jarl Keith, and they like no strangers to come unasked into Alfheim. Yet they are friends of Freya and might let us pass through for her sake. It's dangerous to try, but I am willing.

"Lead on, then," I said. "Find the nearest way into the Alfings' caverns!"

REY led me to a black opening in the rock wall, the mouth of a pitchdark passage that ran straight back into the cliff. Its sides showed that it had been excavated by human ingenuity.

We entered it.

The tunnel was only five feet high, forcing us to stoop as we proceeded. In a few moments, we were blinded by complete darkness, but we groped on. Then Frey stopped suddenly in the cramped passage. I glimpsed the glimmer of green eyes shining at us from ahead.

"Wild beasts?" I asked, my hand going to the hilt of my sword.

Alfings," Frey answered tautly. "They can see us even in this darkness. Take your hand from your sword and do not move, lest you die quickly.'

I stood unmoving as a statue beside Frey, peering tensely into the darkness ahead, listening to the muffled sound of rapid shuffling. The green eyes shining eerily through the blackness were increased in number. The extreme tension of Frey's figure beside me told me that we were in peril. I remembered what Odin had said of the Alfings. They were an older race than either Jotun or Aesir, and had taken no part in the wars between the two great enemy "We are friends, Alfings!" peoples. Frey called clearly.

From the dark answered a heavy,

hoarse, growling voice.

"You come uninvited into Alfheim. The penalty is death, whether you be

Jotuns or Aesir.' "We are Aesir," Frey answered

quickly, "and we entered your passages only because of dire necessity. I am Frey, kinsman of the lady Freya, whom you know well."

There was a low murmur of deep

voices from ahead, as though his statement had caused excitement.

"Freya's name may save us here," he muttered to me, "She has always been a friend of the Alfings, as her mother and mother's mother were be-

fore her." The bass voice answered from the

dark.

"The lady Freya is welcome always in Alfheim. But that welcome has not been extended to the other Aesir, as you well know. However, we shall take you to our king Andvar for judgment. Lay down your weapons."

"Drop your sword, Jarl Keith," said Frey.

Our swords fell to the rock floor together. We saw the shining green eyes approach, heard heavy feet thumping all around us and the sudden scratch of flint on steel. A spark leaped. Big resinous torches flamed with ruddy light, illuminating the whole cramped funnel.

CURROUNDING us were a dozen Alfings, all armed with short, heavy spears and huge maces of metal. They kept their weapons raised alertly toward us, except the two who held the torches. The tallest was only four-anda-half feet high. But their bodies were squat and massive beyond belief, with enormously broad, hunched shoulders, arms and legs of tremendous thickness, and big heads with shaggy, dark hair. Their faces were massive and swarthy, their green eyes shining like those of animals. They wore leather tunics and leather sandals soled with thin iron,

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"Andvar will judge you, Aesir," their leader rumbled to us, his green eyes watching us suspiciously. "If you try to escape, you die."

"We have no thought of escape," I assured him. "Lead us to Andvar.

The Alfings shuffled forward with us along the cramped tunnel, one of the torch-bearers keeping ahead and one behind. The others watched us closely, keeping their weapons alertly raised. Presently the tunnel ran into another low passage chiseled from the rock, and then into another.

"Do these people always live under-

ground?" I asked Frey.

"Not all the time, Jarl Keith. They emerge cautiously by day, sometimes. But their dwellings and workshops are

in these caves."

"Workshops?" I repeated. "The Alfings are cunning workers with strange skills," Frey explained. "Not alone are they wonderful forgers of metal. They know how to transmute metals at will, by an alchemy that makes use of radioactive force. Freya has often told me of their weird achievements."

After an Alfing had run ahead to bear tidings of our approach, I heard drums throbbing hollowly through the maze of passages. Ever louder they boomed, like the amplified beating of many hearts. We emerged from the tunnel into a great cavern, one of their smithies. Great forges blazed in it, and clever trip-hammers were beating out whitehot metal.

The quivering glow of the forges paled the torchlight of our guards, and the banging clangor of the brazen hammers was deafening in the echoing cavern. The Alfing smiths looked up from their work to watch with wide, suspicious green eyes. We passed through another resounding cavern of smiths, and entered a chamber that was filled with a glaring white radiance.

"What is that?" I exclaimed, blink-

"One of the caverns of the alchemists," Frey said. "See, Jarl Keith, how they use strange science to change metals.

A strange science it was, indeed. The primitive science of the dwarfs was accomplishing things beyond the highly advanced science of my modern world. From leaden brackets projecting from the cavern wall were suspended a dozen globes like brilliant, tiny suns, blazing with white radiance. These were bits of extremely active matter procured from far within the Earth by the fearless dwarfs.

Round shields of heavy lead confined the fierce radiation and firmly directed it downward. That intense torrent of force was filtered through varying plates of translucent, quartzlike stone. Thus tempered, the streaming force played upon leaden trays set underneath. On these trays lay iron or copper objects-ornaments, buckles, dagger-sheaths, and the radiation was transforming them into gold!

These little fellows aren't so primitive," I muttered enviously. "Transmutation of metals by radiation- It's been a laboratory experiment in my own world, but here they actually use it."

"It is quite simple, Jarl Keith," Frey stated. "They get the radioactive matter from the safer fringes of Muspelheim, the fire-world far beneath this land, from which we originally came."

"But what about those plates of quartz they use as filters?"

"They're not really quartz, but a synthetic substance the Alfings can make," he explained. "They can be adjusted to screen out any particular frequency of vibratory force desired. Thus the Alfings are able to apply the isolated radiation which the transmutation needs."

We passed through two more of the alchemic workshops, and then reentered the dark tunnels.

"Frey, will the dwarf king help us?" I asked in a low, anxious voice.
"I don't know," Frey said doubtfully.

"He may, if he thinks there's danger of Loki's release. The Alfings fear Loki as greatly as we do."

CHAPTER IX Loki's Prison

HE drums ahead stopped throbbing. Frey and I were escorted into the greatest cavern, which was bright with the flickering light of many torches. Hundreds of Alfings had hastily gathered here. There were a few of their women, short-statured and hunched as the men, and not many children. Men, women and children all stared at us in heavy silence.

Upon a stone terrace at the end of the cavern stood a massive Alfing who wore a heavy gold collar studded with wonderful jewels. Bright, suspicious and fearful eyes looked at us out of his dark, heavy face. It was Andvar, the Alfing king. He listened to our guards' explanation, then spoke to me in a rumbling bass voice.

"Who are you, stranger? You do not look like any Aesir, yet you claim to be a friend of the lady Freya."

"I'm her betrothed," I declared, "and this is her kinsman Frey."

"The lady Freya alone among Aesir or Jotun is welcome here," Andvar said

sullenly. "She alone has always been friendly to us. But you are not welcome. You have trespassed in entering Alfheim."

"Dire necessity forced us to trespass," I said earnestly. "We hurry to reach the deep cavern where Loki lies imprisoned."

My words created a stir of horror among the Alfings.

"Why should you wish to go there?" Andvar demanded. "None of the Aesir has gone to Loki's prison since he was confined there, long centuries ago."

"We must go there," I replied, "be-cause even now the Jotuns will be hurrying by other ways to release Loki. They have abducted the lady Freya, and with her they took the rune key that will unlock the door of Loki's prison.'

Cries of fear broke from the throng of Alfings in the torchlit cavern. I saw Andvar's massive face grow pale be-

neath its swarthy skin.

"They hold the lady Freya and the rune key?" he boomed. "But if they release Loki with the key, it means war again between Jotun and Aesir. This time, Loki might well win the final vic-

"He might," I agreed quickly. "And if Loki succeeded in conquering the Aesir, he will lead the Jotuns to subdue Alfheim."

The terror upon the faces of the Alfings showed clearly that they had already thought of the possibility.

"There is still time to prevent the freeing of the arch-fiend," I continued. "If we can get to his prison before the Jotuns come there with the key, we can prevent them from setting Loki free. Will you help us?"

NDVAR shook his great head troubledly.

"We cannot help you attack the Jotuns. Long ago, we told both Aesir and Jotun that we would have no part in their war, but would live at peace and trade with both of them. We cannot break our promise by raising our weapons against the Jotuns."

"But unless the Jotuns are prevented from freeing Loki, it means war, in which you Alfings may be crushed as between mill-stones! If you strike now to help us, you may save your race. And you will be helping to save Freya, your friend."

Doubt and fear were written on the faces of all the swarthy, stunted Alfings in the torchlight. But as Frey and I waited tensely, Andvar shook his head

again. "We dare not help you. If the Jotuns ever learned that we had raised our weapons against them, then would they seek to destroy us all. They would ruin our gardens and slay our hunters on the surface, and we would not dare emerge any more. Thus would we perish, since we could not live always in darkness."

"It's no use, Jarl Keith," Frey muttered defeatedly. "They're too afraid of the Jotuns to help us in an ambush."

"But they could give us back our swords and lead us by the swiftest way to the door of Loki's prison," I said quickly. "We alone might be able to prevent Loki's release."

Frey nodded eagerly, his eyes burning with sudden impatience to match wits and strength with the enemy.

"Andvar, you can help us without raising your weapons against the Jotuns," I said. "Give us back our swords, and lead us by the shortest route to the door of Loki's prison. We ourselves will undertake to prevent the release of the evil one."

"If the Jotuns learned that we did

even that, they would be enraged against us," Andvar mused. "But they cannot learn of it, unless you tell them. Swear that no matter what befalls you, you will not tell of our part in this.

Then we will guide you to Loki's cave."

Frey raised his hand. "I swear it by
the Norns, the fates who rule all, and

by Wyrd, their mother."

Though I repeated the oath, Andvar seemed only partly satisfied.

"It is a great risk we run. But Loki must not again go free to ravage Midgard with war, death and destruction. We will give you back your swords and guide you, Aesir. It rests upon you two alone to prevent the loosing of Loki?"

THE red torches bobbed as the Alfings turned fearfully to us.

"We are almost to the cavern-prison of Loki," said Andvar. "I fear to go

farther.

The Alfing king's massive face was pale, the dread plain in his green eyes. Our three other dwarfed guides were equally terrified.

"You promised to lead us to the door of the prison," I said. "Take us to where we can see it. Then you can re-

turn."

Andvar shuddered and hesitantly advanced with his three subjects, though now their steps were slow and reluctant. We were passing through a high, vaulted eavity deep in the rock beneath Midgard. Andvar and the other Alfings had been leading Frey and myself into the maze of natural cavities. Traveling always westward and southward, I judged we were beneath the center of the rocky mainland.

Hours before, we had left the tunnels and work-caverns of Alfheim. These gloomy spaces we now traversed showed no sign of their presence. The stunted men so feared the very name of Loki that they never went near this labyrinth of caves. It was too close to where Loki's body lay in suspended animation.

My brain was feverish with excitement, hope and despair, as Frey and I followed our Alfing guides. I realized miserably that even if we were able to prevent the Jotuns from setting their dread lord free, that would still leave Freya a prisoner in dark and distant Jotunheim. A prisoner—or perhaps a tortured corpse by now. . . .

At that thought, I clutched the hilt of my sword with wild passion. The Alfings had given us back our weapons. Upon these two blades we must depend to vanquish the Jotuns who would come with the rune key to release and awaken Loki. It was a desperate course we had charted. But if Frey was right, upon our swords rested the only hope of thwarting the release of the prisoned arch-devil.

Andvar led us into a narrow split in the rock. We squeezed through it in single file, bruising our limbs. From this crevice, we emerged into a silent, tomblike gallery, piled with rocks in fan-

tastic shapes.

"We go no farther!" quavered Andvar. Tremblingly he pointed toward the far end of the great gallery. "There lies the door of Loki's prison!"

PEERED between the masses of fallen rock that filled the gallery. Far away, something like a web of shimmering radiance closed a gap in the rock wall.

"Aye, it is the door of the arch-traitor's prison," Frey whispered. "Well do I remember when Odin placed it there, long centuries ago."

"The Jotuns haven't come yet with the key!" I breathed eagerly. "We're

in time!"

"Now we leave you, for we will not go nearer Loki," Andvar muttered fearfully. He handed us one of the torches. "If you succeed in preventing Loki's release, you will rescue our friend, the lady Freya?"

The dwarf king's anxiety softened

"Be sure we will, Andvar," I promised. "Somehow we'll get her out of Jotunheim."

"She has always been kind to us, as her mother and mother's mother were before her," Andvar declared. "You are lucky to have won her love, stranger."

"I know," I said humbly,

"Hasten, Andvar!" called the other Alfings softly. "The Jotuns may come at any moment."

Andvar heeded their anxious warn-

ing, and hurried through the crevice by which we had just come. The thump of their heavy tread died away.

"Can the Jotuns get to Loki's prison without going through Alfheim as we did?" I asked Frey.

"Yes. There are many ways from the surface into these caves, Jarl Keith. The Jotuns will come by one of them." to all three-dimensional matter. They are controlled by the tiny projector in the rune key. That is why, if the key were destroyed, the door would vanish in one terrific flash of force."

With a queer, shrinking dread, I approached the transparent web. I was about to touch it when Frey hastily

drew me back.

"Keep a safe distance," he warned.
"The extra-dimensional force web would blast your hand."

Shaken, I stood a few feet from the shimmering curtain, peering into the small cave beyond.

"Loki!" I whispered hoarsely.

E lay upon a skin rug, dimly visible in the light of the radiant door. His arms were outspread, his face



Holding the torch high, I advanced with Frey through the lofty cavern. A profound silence made the guttering of the torch, even my own breathing, seem loud to my ears.

My heart was pounding as we approached the shimmering door at the end of the cavern. Now I saw that the door was not of matter at all, but of force, that apparently their web of light was probably less vulnerable than any material door could be. It was projected from apertures on either side of the opening. I guessed that hidden inside the rock must be the mechanisms that projected the force. Frey confirmed my guess.

"Odin himself devised the projectors and sunk them in the rock. They are operated by inexhaustible atomic power, and generate an absolute barrier upturned. Bright gold was Loki's hair and mustache. Slender and gracefully formed was his unmoving body. He wore helmet, brynja and sword like those of the Aesir.

Loki's face was—beautiful! Mere handsomeness could never have struck such awe into me. His eyes were closed, the long, golden lashes slumbering on his white cheeks. "Most beautiful of all the Aesir was Loki outwardly—a fair shell that hid his black, evilly ambitious soul," Frey said fiercely. "See, Jarl Keith. Beside him lie his monstrous pets, prisoned like himself in suspended animation."

I tore my eyes from the angelic face of Loid. When I looked beyond him, I felt the hair of my neck bristle. Upon the rough rock floor of that little cavern crouched a huge gray wolf. Large as a bear, it held its mighty head between its paws, its lips baring the awful fangs in an eternal snarl. In a complete circle around both Lokl and the frightful wolf lay the black, motionless coils of an enormous serpent.

"The wolf Fenris and Iormungandr, the Midgard snake?" hissed Frey, his eyes glittering hate. "The pets that Loki cherished, and that were prisoned here with him by Odin's science."

"Whoever heard of a wolf and serpent as big as that?" I gasped. "Loki made them grow that large,

by some scientific means," Frey muttered. "Another of his evil experiments."
"He must have used some form of

glandular control," I said thoughtfully.
"Loki certainly must have had plenty
of scientific knowledge."

For a few moments, we stared at the three fiends in silence.

"Frey, are they really only in suspended animation?" I whispered. "They seem to be dead."

"They are alive," Frey assured me. "Only the functions of Loki's physical body are suspended. His mind is conscious, even at this moment. Just as a man can be paralyzed and still be fully conscious, so it is with Loki."

"But even if he's conscious, how could he have influenced me from afar to keep the rune key? How could he have raised the storm that blew me here, and given orders to the Jotuns to be waiting for me?"

"In his researches, Loki had developed the power to send telepathic messages," Frey explained tautly, "Do your scientists have that power?"

"They're just beginning to find out about it. They call it extra-sensory perception."

"Loki had developed that power to great lengths," Frey said. "Though his body is prisoned here, his conscious mind can send forth powerful thought messages. Such commands he sent into your mind, Jarl Keith, from here. And such messages he must have sent to the Jotuns, ordering them to operate his strange mechanisms. They can raise tempests such as blew you here."

"And he's been held here for centuries, with his mind awake and conscious!" I muttered in horror, shuddering. "What is that vapor drifting about

the chamber?"

"That contains the secret of suspended animation," Fey told me. "Odin devised the vapor, which freezes and halts the chemical activity of the body's cells, at the same time preserving each cell unharmed. The vapor alone holds Loki and his pets frozen. If the radiant door were opened and the vapor escaped, the arch-traitor and his pets would awake—"

"Listen!" I hissed suddenly, clutch-

ing Frey's arm.

I had heard a dim murmur of voices, footsteps approaching from the farther end of the gallery.

"The Jotuns come!" breathed Frey.
"Coming to free Loki!" I said.
"We've got to hide, and take them by
surprise!"

CHAPTER X

Captives in Jotunheim

DASHED out the torch and flung that way. We were plunged into darkness that was relieved by only the pearly radiance from the shimmering door of Loki's prison. I pulled Frey behind the shelter of one of the fantastic piles of rocks that littered the cavern. We drew our swords and crouched there, waiting.

The voices and footsteps grew louder. Red torchlight began to gleam vaguely into the dark gallery from the crevice at its far end. Then, as the torch-bearers stepped into the cavern, it blazed with flickering crimson light. There were ten people in the Jotun party. Besides eight big, black-bearded Jotun warriors, three of whom bore torches, there were two leaders.

One was a giant Jotun with a wolflike, savage face and glittering black eyes. His great helmet and armor were studded with gems, his fierce face blazing with excitement. The other was a dark-haired Jotun girl whose sinuous form was clothed in a long, deep-blue gown. Her dark beauty was striking, but there was something unholy in the avid eagerness of her lustrous black

"Utgar, the Jotun king," whispered "And Hel, princess of Jotunheim, past accomplice of Loki in his plots against the Aesir and his pupil in dark scientific knowledge."

"Utgar has the rune key," I muttered, gripping my sword-hilt.

I had seen the little gold cylinder shining in the hand of the Jotun king. From Utgar came a bellow of brute triumph, bestial exultation, as his eyes found the shimmering door at the end of the gallery.

"It is the place!" he shouted, "There's the door of our lord's prison."

Hel, the dark Jotun princess, uttered

a low laugh.

"Said I not that I could bring you to the place by ways which would avoid the Alfings?" she asked in a throaty, sinisterly rich voice. "For I myself was guided by the thought message of our lord Loki, who instructed us how to get the key from Asgard-'

Her supple figure stiffened, and her narrowed eyes roved around the torch-

lit cavern.

"I hear our lord's mind speaking to me now," she murmured. "He warns that there is danger lurking in this place. Enemies have been here and are still here!"

"Frey, we must strike now," I whispered urgently. "Fell the torch-bearers, while I strike down Utgar and grab the key. In the darkness, we may be able to escape."

But as we tensed to spring out on the Jotuns, the princess Hel uttered a

sharp cry.

"Our enemies are there!" She pointed straight at the rocks behind which we crouched. "Our lord warns-"

Instantly Frey and I leaped out, with our swords flashing in the torchlight. But the split-second warning of Hel had destroyed our advantage of surprise. Just as swiftly, Utgar and his warriors had ripped out their swords. They met us with raised blades as we charged them,

LEAPED toward Utgar and my sword slashed desperately. But with a roar of rage, the Jotun king parried my stroke with his own great blade. Numbing shock deadened my arm as my steel clashed against his. Sparks leaped from the blades. Seeking to beat down his guard with terrific strokes and seize the rune key from his hand, I glimpsed Frey in silent action. He was striking down first one of the three Jotun torch-bearers, then

The princess Hel had darted out of the path of combat and stood with a tiny dagger in her hand. Her eves were blazing with excitement. Skilled as Frey was, and regardless of my furious resolve to rescue Freya, we were beset by greater numbers. They began driv-

ing us back.

"It is Frey and the outlander!" Utgar bellowed as he fought off my attack. "Separate them and cut them down!"

"Kill them!" Hel commanded throat-"They seek to prevent the freeing

of our lord!"

With a strength that was born of desperation, I beat down Utgar's sword. My blade whirled up and I yelled hoarsely as I set myself to cleave the neck of the Jotun king.

"Jarl Keith, look out behind!" shouted Frey, though he was hard-

pressed by three antagonists.

I heard a sword swish down behind me. I started to spin around, but the blade descended on my helmet with stunning force. My brain rocked, and bursting light blinded me.

I felt myself falling, my sword dropping from my nerveless hand, my vision beginning to darken. I glimpsed two Jotuns leaping upon Frey's back as he fought. Striking him with daggers, they dragged him down at last, covered with blood.

"Now give me the rune key, Utgar!" I heard Hel cry. "I'll release our lord before other Aesir come to stop us."

"Aye, set Loki free at once!" Utgar bellowed, his brutal, dark face triumphant as he handed her the golden cylinder

Dimly, while I fought to retain consciousness, I saw Hel glide forward to the shimmering door of Loki's prison, the rune key in her hand. I saw her point the golden cylinder toward the shimmering web. When she pressed

the graven runes upon it in a complex combination, the door began to fade! "Our lord's mind instructed me well how to operate this key that Odin's

science devised!" gloated Hel.
The web of force was gone. The
projectors which had maintained it had
now been turned off by the operation of
the rune key. Out of the cave within
rushed a cloud of pale-green vapor. Hel
recoiled from it. Utgar, too, staggered

back, choking and dazed. My consciousness was passing.

Darkly I perceived the prostrate body of Loki stirring. I saw him stumble to his feet. The huge wolf Fenris was rising, opening blazing, feral eyes, snarling a savage roar that reverberated thunderously. And the coils of the giant serpent were sliding slowly in reawakened life.

Loki stepped out of the chamber in which he and his monstrous companions had been imprisoned so long in suspended animation. As he stood, his tall, slender, graceful form seemed to expand. His beautiful white face and gold hair shone in the torchlight.

Blazing like those of Lucifer newly risen from the pit, those dazzling eyes swept over the awed, trembling Jotuns, the prone forms of Frey and myself, the stupefied and dread-shadowed face of Utgar, the unholy eagerness of Hel's dark, beautiful face, Tangible light and force seemed to flame from Loki's blue

Beside Loki, the wolf Fenris was snarling horribly at us. Its terrible white fangs were bared, its huge head thrust forward with ears flattened. And on the arch-traitor's other side reared up the great spade-shaped head of the Midgard snake. Cold reptilian eyes glittering, the forked red tongue flickered in and out between its scaly jaws.

Darkness was claiming my mind. As though from dim, enormous distances, I heard the jubilant, golden voice of Loki, "Free at last! Now comes the hour of my vengeance upon the Aesir!"

That voice was the last thing I heard. Even as its accents of superhuman triumph struck my ears, complete unconsciousness claimed me.

A THROBBING, blinding pain in my head was my first sensation of returning consciousness. Then I became aware that I lay upon a hard bed of some kind, and that the air was cold and damp. I tried to open my eyes and could not. Summoning strength by a great mental effort, I raised my hand weakly to my head. Instantly I heard a joyful, sweet voice,

"He awakens, Frey!"

That voice, vibrating through the fibers of memory in my dazed brain, compelled me to open my eyes. Freya was bending over me. Her pale, beautiful face was framed by her unbound yellow hair, and it was eager with gladness. Her warm, blue eyes looked fondly down into mine.

She still wore the white linen gown that she had worn at the feast in Valhalla, before her abduction. And I saw, too, that Frey, pale, and bandaged around his neck and shoulder, had stumbled over to look down at me.

"Freya!" My voice was only a weak whisper.

Tears were in her lovely eyes as she put her face against mine, her cool cheek against my lips.

"Jarl Keith!" she whispered. "I feared you were dying. It has been hours that you have slept like the dead."

Weakly I put my arms around her slim shoulders and held her close to me. The bright gold of her hair on my face seemed at that moment to hold all of sweetness in the world.

Then I looked beyond her. Frey's pale, haunted face and terrible remembrance rushed through my stunned mind. Loki and Fenris wolf and the great serpent emerging from their prison!

"Loki!" I gasped. "I saw him come forth--"

"Yes, Jarl Keith," said Frey. "That which we Aesir have feared for centuries has happened. The arch-devil has been released."



The feral eyes glared down into mine with hatred (Chap. XI)

centuries—yet conscious to add new torments and more vicious horrors to the old ones.

REYA had raised her face. She was looking at me with blue eyes that were bright with dread, her red lips quivering.

"But where are we?" I cried, trying to sit up. "How is it you're with us, Freya?"

"We are in Jotunheim, Jarl Keith," she whispered. "I have been held here since the Jotun raiders brought me here and took the rune key away. And you and Frey were brought here and prisoned with me but a few hours ago. You were unconscious — dying, I feared."

Her slim arm supported me as I sat up. Dazedly I stared around. We occupied a small stone cell, with walls that were of massive, damp blocks. The heavy wooden door was solidly closed. One tiny, barred window admitted pale daylight and barely enough air. Frey and Freys helped me as I rose to my feet from the rude hide couch where I had lain. I stumbled with their support to the window, and looked out at ancient Jotunheim.

Jotunheim crouched like a great,

slumbering reptile on a low plateau above steaming marshes. A sluggish, black river wound from the rugged hills behind the city. Down past the stone walls, it oozed through the dank, brooding marshes to the distant sea.

It was a city of squat, massive castles and forts, built with antediluvian rudeness. The giant stone blocks were overgrown with green, hideous moss. Our cell was in the basement level of the most enormous of the castles. a

high, oblong structure.

Byen in daylight, the city was filled by chill, foggy mists from the steaming morasses below. From our window I could see scores of longships moored in the river which wound past Jotunheim's northern wall. Hosts of Jotuns were busy on ships and shore. Warriors and thrails were carrying stacks of weapons, fitting new oars and masts, all in a bustle of hurried activity. Through the ancient, somber city trotted squads of hastening warriors, hurrying men and women. Everyone was feverishly engaged in mysterious preparations.

"Captives in Jotunheim," I moaned.

"And Loki-"

"He is here, too," Frey said unhappily. "In this palace, which belongs to Utgar, he directs the preparations you see. Those are the preparations for the last great attack on Asgard."

Freya, holding my arm, looked up at me with blue eyes that were almost

black with dread.

"The Jotuns went mad when Loki arrived with Utgar, Hel, you and Frey," she said. "They cry that now at last shall they wipe the Aesir from existence."

"Ragnarok, the final struggle, draws near," Frey declared solemnly. "Aye, this is the struggle that we Aesir knew must come if ever Loki were freed."

"But Odin and the Aesir will not yield!" I cried. "They will throw back

Loki and the Jotuns!"

"I pray the fates that it be so," Frey said. "But the Jotuns outnumber us now more greatly than before. With Loki and his evil science, Fenris and Iornungandr fighting on their side, we have reason to fear for Asgard. But if perish we must, the Jotuns and Loki shall perish with us. That I know."

"Can't we sneak out of here and get back to Asgard?" I asked urgently.

IS haggard face twisted into a hopeless smile.

"How could we even escape this cell? And if we did, the whole city is swarming with armed warriors making ready. Never could we win past all the soldiers of Jotunheim to freedom."

"What will they do with us?" I pressed. "Why do they hold us instead

of killing us?"

"I don't know," he muttered. "Be sure that Loki has some evil scheme in mind that will make use of us."

He staggered, and I hastened to help him to the hide couch, where he sat

down weakly.

Frey's wounds in that battle in the cave had been serious ones. He had lost most of his unaging strength.

My own strength was rapidly returning. I had paced back and forth from door to window of the cell, racking my brain for some means of escape. There was none. Finally I gave it up and sat

dully down beside Freya.

Hours must have passed as we sat in a heavy, hopeless silence. The Sun was setting through the slowly thickening mists of Jotunheim, casting a pale beam onto the stone floor. There was a rattle at the lock of our door. It opened, and a big, ferce-eyed Jotun captain stood glaring at us. Behind him were a dozen guards.

"You, outlander," said the captain to me. "Come with us. Our lord Loki

would speak to you."

"What does Loki want with me?" I demanded, rising painfully to my feet. "Is it for me or for you, outland dog, to question the reasons of our lord?"

roared the captain. "Come, or be dragged!"

I pressed Freya's hand and went with the guards. In a gloomy, stone corridor, they bared their swords to cut me down if I attempted escape or resistance. The door of the cell was barred again, and two of the Jotuns took their places outside it. The others marched me

The dank chill of the passage struck me to the marrow. But I felt a greater chill of dread at this summons from Loki. I was going to face the archtraitor who had waked for his final, most vicious revenge. . . .

CHAPTER XI

The Arch-fiend Alive

WE passed through gloomy corridors and chambers of age-old stone, crusted with evil-looking white fungi and lichens, dripping with condensed vapor. Rats squeaked across our path unheeded. Up broad stairs of troglodytic hugeness, we climbed into the upper levels of the massive palace. Everywhere we met soldiers and thrails hurrying to and fro, carrying piles of spears and arrows, stacks of shields, and other war suoplies.

Tense preparations for the attack on Asgard were unceasingly going on through the whole palace and city.

The Jotun captain led us through another corridor, to the edge of a large,

poorly lit hall.

"Wait," he barked, stopping. "Our lord is not finished with Princess Hel."

"What are they doing?" I asked, awed. "What kind of machinery is that?"

"Silence, outlander!" snapped the captain.

I stood among my guards, staring at the amazing scene that was taking place. The hall into which I looked was of great dimensions, its roof supported by a forest of massive stone pillars. The only illumination came from pale shafts of daylight that trembled down from small, high, slit-windows, as though afraid to enter this dark place. White wisps of fog still swirled amid the pillars, like homeless ghosts idly drifting.

On a raised stone platform at one end of the hall, in a massive throne carved of black rock, sat Loki. His bright golden hair glittering in the gloom, and the flashing mail he wore made him seem a figure of living light. Beside his throne, mighty head between its paws, lay the monster wolf Fenris. The Midgard snake I did not see.

Loki's beautiful face was intent, his graceful form leaning forward. Beside his throne stood the big, black-haired Jotun king Utgar, and the darkly beautiful Hel, princess of Jotunheim. They were staring into an unfamiliar-looking mechanism whose complexities of glowing wires and glass rods were partly hidden by a metal cover. On the cover, though, was a square quartz screen that reproduced a living scene. "See, Jot Loki, the picture clears!"

cried Hel.
"I see, too," Utgar roared. "It is As-

"I see, too," Utgar roared. "It is Asgard!"
"Aye, it is Asgard," said Loki in his

wonderfully sweet voice, his eyes brooding as he peered into the screen. "Behold, the nobles of the Aesir are gathered in Valhalla for council. We shall hear them."

Loki touched another control. From the great hall's edge, I could barely detect a low buzz of speech from the mechanism.

"I cannot hear clearly," Utgar complained. "What are they saying?"

"The king Odin is speaking," said Hel, with a contemptuous smile on her beautiful face. "He tells the Aesir nobles that he fears Loki is loosed, with Fenris and Iormungandr, and that Freyand Freya and the outland Jarl are captives in Jotunheim. The Aesir look wildly at one another, at that news. There is a shout from Thor."

"That stupid, brainless bear!" said Loki scornfully. "A lout who knows nothing but wrestling, eating and cracking skulls."

"What says the Hammerer?" Utgard asked.

angry. His head is bound from a wound, as you can see. He roars that the Aesir vanquished Loki and the Jotuns once before, and that they will do so again. And this time, he says, they will slay Loki instead of prisoning him."

Loki leaped to his feet. A flash of rage as blinding and terrible as lightning twisted his face.

"Slay me?" he hissed. "Sons of the Aesir, my ancient people, you will rue that thought when Asgard goes down in flame and death."

"The king Odin is speaking again," Hel told Utgar. "He says they must prepare for the coming struggle. They must devise, if possible, some way to rescue Frey and Freya and the Jarl Keith from Jotunheim. And Odin says he fears Loki may be using his scientific powers to spy on them. He will

make sure. he says-"

Hastily Loki reached out and touched a screw on that strange mechanism. The picture in its quartz screen and the buzz of voices ceased. I knew it must be some super-development of television, able to operate without a transmitter.

"We have seen and heard enough," Loki said moodily. "The Aesir know we will attack them, but they'll have small time to prepare. Two days hence, we march on Asgard to crush them."

"Aye, but be careful, lord," warned Utgar anxiously. "Odin, too, has great powers of ancient science. Once before, he snatched victory from us because of your too great confidence."

"Croak not your warnings to me!" Loki stormed. "I have had centuries in which to think. Nothing can save the Aesir this time. Get you both gone

now, till I call you."

At the tone of his master's voice, Fenris raised his enormous head and snarled horribly. Utgar hastily retreated from Loki's blazing wrath, backing toward a door. Less urgently the princess Hel followed him. Without looking in the direction where I stood with my guards, watching this scene in fascinated horror, Loki spoke.

"Bring the outlander before me."

As the Jotuns marched me forward I saw that they were all trembling. They halted me in front of the black throne. I looked up defiantly into the brooding blue eyes of Loki. He spoke finally to the captain of the Jotun guards.

"Take your men and wait outside the

"But, lord, we can't leave you here alone with this outland dog!" protested the captain.

Loki turned a withering glance on him.

"Think you I need such as you to protect me?" he asked bitingly. "Get you gone!"

The captain and his men almost tumbled over themselves in their haste to leave the hall. I stood there alone, facing Loki, the wolf, the snake that had slid to the throne, in that vast and gloomy hall of drifting fog and chill. Uncontrollably my heart pounded in sudden excitement and hope.

For my eyes had fastened on the sword that hung at Loki's side. If I could end the arch-traitor's life with that thirsty blade, I would die gladly, knowing that I had atoned for bringing the rune key into peaceful Asgard.

I sprang forward with wild determination. But instantly, like a thunderbolt of hurtling flesh, the huge wolf Fenris leaped upon me. The monster's weight knocked me to the floor. His huge, hairy body crushing me, his hot breath scorching me and terrible fangs gleaming, I saw Fenris' mighty jaws yawning above my face.

THE glaring, feral green eyes of the gigantic wolf blazed down into mine with almost human hatred. Those jaws gaped to crush my skull like an eggshell.

"Fenris, loose him!" snapped Loki's voice, coming as though from a great distance.

Fenris turned his massive head a little, and a protesting, savage snarl rumbled from him. He was resisting his master's order. He wished to kill me. "Do you grow disobedient?" flared

Loki's voice.

I heard his quick step coming from the throne toward me. Still pinned down by Fenris' huge weight, I saw Loki reach down and smack the wolf stingingly on its great muzzle.

Fenris whimpered apologetically to his master. The wolf backed off hastily. As Loki went back and seated himself again on the black throne, the huge animal again crouched down beside it. But his feral, blazing eyes never left my face. Shaking, I stumbled to my feet. I saw amusement in the brilliant blue eyes and angelic face of Loki as he sat regarding me.

"Do you still wish to kill me, outlander?" he asked with a shockingly sweet laugh. "I might not be able to hold Fenris from your throat, next time."

Hearing his name, the monstrous wolf growled deep in his throat, snarling and baring his great fangs as he watched me. Hot resentment at the mocking devil who was regarding me with such amusement made me stiffen and clench my fists.

"If you are going to have me killed, why not get it over with?" I demanded.

"I am not sure that I shall take your life, outlander," said Loki, searching my face. "After all, I owe you much. It was you who brought back into this land the rune key that finally gave me and my pets our freedom."

"I wish I had died before your hideous mental commands seduced my

brain!"

"Now why should you wish that?" Loki asked with deep interest, "Why

should you hate me so?"

"Because I know that you are evil and that your plans are vicious," I said harshly. "For twenty centuries in the outside world, the name of Loki has been synonymous with treachery, even though no one in that outer world dreams that a real Loki ever existed.

Loki nodded his golden head

thoughtfully. "That is true. Yet what evil have I done to you, Iarl Keith? Have I not brought you into a land that no other of your race has ever seen? Have I not given you new and undreamed-of adventure? What more could I do for you? You see, I know that in your soul you are an adventurer, a seeker of the new and the strange.'

"It's what you plan to do to the Aesir that makes me hate you," I retorted. "I admire them-and you plot to use

the Jotuns to destroy them.

OKI'S beautiful face darkened, like it. His wondrous eves throbbed with

an age-old hate.

"I loved the Aesir, too, Jarl Keith," he said broodingly. "Yes, long ago when we dwelt in deep Muspelheim and I was second to Odin himself, I did much for my race. I delved into scientific secrets that had been hidden from them, and I found new truths. I would have done much more for them, had they made me their ruler in Odin's place. For I was never satisfied, as Odin was, with a static, stagnant well being.

"I burned with the desire to acquire

all knowledge that man could acquire, to know the reason for every phenomenon in the world and in the sky. I longed to acquire every power that man ever could acquire, so that we should be unchallenged masters of all nature. It was I who freed the Aesir from sickness and age. I made them almost immortal, by kindling the atomic fires whose radiation prevents disease and age. Was that not a great gift I made to my people?'

As a scientist, I could not help feeling a certain sympathy with Loki. Yet I realized that he was presenting merely

his own side of the case.

"Yes," I admitted. "But in making the Aesir that gift of near-immortality, you almost destroyed them. brought catastrophe on the subterranean world of Muspelheim, and forced them to flee up here. No wonder Odin forbade you to carry on such dangerous researches!"

Loki shrugged. "There can be no great victory without great danger, outlander. I had a vision of leading the Aesir to undreamed-of heights of power and wisdom, though by a road beset with vast perils. I was willing to risk those perils, to be great or to die. But dull Odin blocked my path. He said: 'It is not good to endanger all the world to gain power and learning for ourselves.'

"The Aesir agreed with him, and turned from me and my vaulting dreams. I would have made them like eagles soaring into the sky. But they preferred to follow Odin and live out their lives in dull, accustomed routine.'

Loki's eyes blazed, and his graceful form stiffened on the black throne as he spoke. And I could not help feeling sympathy with him. No real scientist could willingly submit to suppression of his desire to know, his yearning to master the laws of nature. Loki's blue eyes fastened on me, and he smiled thoughtfully, his passion fading.

"I read your mind, Jarl Keith," he said quickly, "and I see that you think

the same as I."

"Not your lust for power," I snapped.
"Do not deny it," he said. "You are
of my own breed, Jarl Keith. We are more alike than any others in this land.

For just as I risked my own fate and that of my people to win new knowledge and power, so you, who are also a scientist and searcher after truth, came northward into danger and hardship to search for new, strange truth. Yes, we two are of the same minds."

THOUGH his voice rang with sincerity, I fought mentally against

his seductive thoughts.

"It is because we are so much alike," he continued, "that I was able to fling the web of my suggestion into your brain. Though you were far away on your ship beyond the ice, yet I could direct you to recover the sunken rune kev."

"How could you do that, Loki?" I asked with intense interest. "How could your will range far when your body was held in suspended animation

in that prison-cave?"

"You outlanders have concentrated more on mechanical devices than on the subtler forces of science. Otherwise, you would understand better the nature of the mind. The brain is really an electro-chemical generator, and thought is the electric current it generates. A brain which has developed the power can fling its web of electric thought-impulses abroad and into another brain. It can see with the senses of that other brain and even somewhat direct its physical body.

"Thus, during the centuries that I lay prisoned and helpless, I sent the web of my thoughts far afield, seeking a means of escape. At long last, I located the rune key where the Aesir had thrown it in the outer ocean. I could not send any of the Jotuns to secure it, for they could not rost be vast ice without perishing. But at last your ship came north and was near the

sunken rune key.

"I seized the opportunity to influence, you had it, and were in the air in your flying ship, I sent a mental message to the princess Hel, my pupil. I commanded her to operate the storm-cones in my laboratory, which would cause a tempest to blow you hither."

"Storm-cones?" I repeated. "What device could be used to cause such a tempest?" Loki smiled and rose to his feet. "Come, Jarl Keith, I'll show you. I think you, a scientist like myself, will be interested in my laboratory."

CHAPTER XII

The Master Scientist's Laboratory

HE led the way across the vast, many-pillared hall. The giant wolf, Fenris, rose and followed us on padding feet, its feral green eyes never leaving me. Loki brought me into a smaller stone chamber. It was indeed a laboratory—the strangest I had ever seen.

Two small, blazing suns of radio-active matter, suspended in lead bowls, illuminated the dusky room. The intense white radiance glittered off an array of unfamiliar mechanisms and

instruments.

I saw another of the complex instruments of remote vision, with a square quartz view-screen, such as Loki, Utgar and Hel had been using in the great hall. And I noticed devices which appeared to be similar to the transmutation apparatus used by the Alfings. But these were greatly refined in design. Using concentrated beams of radiosctive energy shot from leaden funnels, they could effect even more rapid transmutation of small metal objects.

Loki led the way to the most striking feature of this array of alien scientific instruments. Proudly he gestured at a row of big objects which looked like heavy nozzles of fused quartz mounted on swivels above square, coppershielded mechanisms. The interior complexities I could not see. Loki laid his hand on one of the nozzles of mastr.

"These are the storm-cones I long ago devised, Jarl Keith. They can cause the most terrific tempest at a distance of even hundreds of miles."

"How can they do that?" I asked in-

credulously.

"It is quite simple." He smiled. "A lightning storm is caused by a sudden sharp difference in electric potential between cloud and Earth, or cloud and cloud. These storm-cones spray a carefully aimed and canalized electric field that causes such an abnormal difference of potential in any desired location. When I lead the Jotun horde to attack Asgard, I'll first bring destructive lightning down upon the Aesir forces. Then they'll fall easy prey to my savage warriors."

I was too appalled by that threat to comment. Loki led me toward a door on the opposite side of the laboratory.

"Now perhaps you can instruct me a little, Jarl Keith," he said. "Come with me."

The door opened into a big, stonepaved court outside the ancient citadel. It was walled, but a great gate in one wall was open, leading out onto the slope that ran steeply toward the river. Dusk had fallen, and the white mists that shrouded Jotunheim were thicker.

My eyes flew to a familiar object in this court. It was my rocket ship. It had not been destroyed, after all.

"Yes, it is your flying ship," Loki said. "After you landed in Midgard, I knew it was only a matter of days until I was released. I sent a thought order to the princess Hel to have Jotun ships bring the craft here, for I wish much to examine this product of the outland world's science. But don't cherish any hopes of making a sudden escape in it, Jarl Keith. I've only to say a word to send Fenris ravening at your throat."

The monster wolf behind us snarled again, as he heard his name. I

shrugged.

"I wouldn't leave without Freya and Frey, anyway."

OKI inspected the whole interior of the plane, asking me quick, intelligent questions about every feature of it. He seemed to grasp the design of the ship and its highly improved rocket motor almost instantly.

"You are clever, you outlanders, to devise such things," he said with sin-

cere respect.

"Don't you want to look at the con-

trols?" I asked.

My heart was thudding, for I had seen a wild, insane opportunity. Loki entered the cabin, and I explained the controls. Then I opened the sack of white chemicals which we always carried on these Arctic flights. I took out a handful and showed them to him.

"These are chemicals that generate heat. We use them to free the plane's wheels if they become frozen into the ice."

"That, too, is clever," he mused as he emerged from the plane. "You outlanders are indeed mechanically ingenious, though you have not probed the ancient science of the deepest forces of nature as we Aesir did."

He said nothing more as he brought me back through the laboratory to the dusky great hall. Fenris stalked at our

heels. Then Loki turned.

"I could teach you our ancient science, Jarl Keith," he said, to my surprise. "You could learn much that your science puzzles over. And you would be second only to me, once the Aesir are conquered."

I began to understand what he was

suggesting.
"You want me to turn against the Aesir—against my friends?"

"That girl Freya—and even Frey, if

you wish—can be spared."

"Why do you wish me to become your follower?" I asked suspiciously.

Loki's beautiful face was undeniably sincere as he answered me.

"Because it is as I said. We two are more akin than any others in this land. We seek scientific truth and love the new and strange. Besides, I have no human friend, for Utgar is but a brute-brained tool, and Hel is but a wicked wildcat who never can learn my science. It is true that I have Fenris and Iormungandr. My wolf and serpent have wisdom and cunning which are almost human, but they are not human friends. Speak, Jarl Keith. Will you join me as friend and follower?"

Stunned by the offer, I tried desperately to think. If I could make Loki believe I was willing to join him, and

then work against him-

"Your words are convincing," I answered, as though deeply thoughtful. "We are alike. I think that I shall join you, Loki."

Loki smiled at me, a weary, half-

scornful, half-amused smile.

"Jarl Keith, I thought better of you than to expect you to try such transparent stratagems as this upon me," he said. "Can you not understand that in

experience you are to me but as a small child? Can you hope to dupe me when

I can read your mind?"

I looked up at him defiantly.

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"I would fight the devil with fire. You know the truth now, Loki. I have only hate for you, as for all traitors. You prepare to lead these savage Jotuns against your own people, because your own kind has cast you out."

I know that got under his skin, for his syes narrowed. His mouth tight-ened, and for a spilt-second I glimpsed that angelically beautiful face warp into a hell mask of white fury. It was as though the raging evil inside him looked forth naked and unhidden. The wolf Fenris, as though understanding his master's mood, sprang to his feet and snarled viciously at me. Then Lo-ki's face cleared, and he laughed at me without a trace of ill-feedler.

"You have courage, Jarl Keith, proving even more that you are like myself. Yes, you are afraid to admit to yourself how much we two are alike, and how much you like me."

THAT shot got home to me, for I sensed that it was the truth. I did feel a sympathy for this fallen Lucifer that was hard for me to thrust down.

"You shall stay prisoned here in Jotunheim until after our forces have conquered Asgard," Loki decided. "Once the Aesir are destroyed and the past cannot be recalled, I think you will be wise enough to join me as friend and follower." He raised his voice in a peremptory order. "Guards, return this prisoner to his cell!"

The Jotun captain and his men came running from outside. Not daring even to look up at their overlord, they hus-

tled me out of the hall.

As I went with them, I looked back. Loki seemed already to have forgotten me. He sat in that dismal, mist-filled hall, brooding with chin in hand, his bright-gold head bent. The wolf Fenris looked up at him with faithful, brilliant green eyes.

I was conducted back through the same dank corridors and passages to the subterranean level of the palace. The tall guards clanked toward the door of our cell and opened it. Without ceremony, I was thrust in. When the door was locked after me, the guards marched away.

Freya came anxiously across the dark little cell and found her way into my arms

"I feared that you would not return, Jarl Keith," she moaned softly.

"What did Loki want with you?" Frey asked, his pale face intent.

I told them most of what had taken place. Freya listened with horrorwidened eyes, her kinsman in thoughtful silence.

"So Loki wishes you to join him," he muttered, when I had finished. "That

is strange."

"I think it's only because he's lonely," I said. "He has nothing but contempt for these Jotuns, whom he means to use merely to crush the Aesir. I felt a little sorry for him."

Frey's pale, handsome face tightened as

he warned me.

"Heed not the arch-traitor's subtle persuasions, Jarl Keith! Never lived anyone who could harm man or beast by his silver tongue and handsome face as can Loki."

"Never fear," I reassured him. "My lovalty is with the Aesir. No tempting

could ever change that."

I went on to tell them of what Loki had told me in his laboratory, explaining his intention to use his storm-cones against the Aesir.

"We must get back to Asgard and warn Odin, so he can prepare a defense," I concluded. "My flying ship is in the court on the citadel's riverside..."

"How can we reach your craft when we can't even get out of this locked

cell?" Frey replied hopelessly.

"I think we can escape this cell, at least," I said. I drew from my pocket a handful of white chemical powder and showed it to them. "It's the chemical I always carried in my plane to melt ice from the wheels when necessary. I showed Loki this handful and then put it in my pocket."

"What good will that do, Jarl Keith?"

Freya asked puzzledly,

"The lock on the door of this cell is a crude one, made of soft copper," I answered. "I believe this substance can burn away enough of the lock to free us. I'm going to try it anyhow."

I stuffed the chemical powder into the large crevices of the clumsy lock. Then I took our jar of water and poured a little over the powder. The hissing and sizzling of the chemical reaction continued for several minutes. When it ceased, I gently tugged at the lock. It still held. I pulled harder, and with a rasp, it gave way.

"Follow me," I whispered tensely. "I think I know the direction to the court where the plane is. If we only can get through the corridors without meeting

anyone!"

We emerged into the dusty stone passage. I led the way toward the right, taking the first cross-corridor that led northward. The cold chill of the night fog penetrated the marrow of our bones, and our nerves were harpstring taut as we pressed on through the dark corridors.

Suddenly I shrank back into the shadows. I had seen two Jotun warriors approaching from a cross-corridor

"Hurry!" one was urging the other fearfully. "Do you wish to meet the hideous one that now lurks in these passages?"

"Frey, we'll have to jump them," I whispered. "Be ready."

The two Jotuns came around the corner into our dusky corridor. Frey and I leaped on them, taking them utterly by surprise. What followed was not pretty. We had grabbed their throats, for it was essential that they should not give an alarm. There was a fierce, deadly scuffle in the misty, dark tunnel, until we throttled them.

The Jotuns lay limp when Frey and I straightened, panting. We took the swords the two warriors had not had a

chance to draw.

"Come on." I panted. "This way. Those warriors must have entered from one of the outside courts."

We hurried down the shadowy passage from which the Jotuns had come. Then Freya suddenly stopped, pulling

me to a halt. "Listen, Jarl Keith," she urged in a hushed voice. "Something sinister is coming."

In the silence, I heard a strange, silky, rustling sound in the dark and misty passage ahead. It was growing

nearer, louder-

A giant, spade-shaped head reared out of the curling mists ahead of us! Two opaline, unwinking eyes that held the dull glitter of an alien intelligence contemplated us from above a gaping mouth in which a forked red tongue flickered.

"This is what the Jotuns feared!"

Frey cried wildly.

"The fates save us!" Freya prayed. "It is Iormungandr."

I also recognized that giant, scaly body of long, rippling blackness, that huge head and those alien, glittering eyes. It was Iormungandr who towered before us in the misty dusk of the chill tunnel. The ageless and undying, the great Midgard serpent itself, was

glaring down with blood-lusting eyes! CHAPTER XIII

Flight and Death

TE stood petrified by horror in that foggy, stone-walled corridor, gazing cataleptically at the hideous creature whose reptilian head was rearing up from the curling white mists. Freya's slim figure had shrunk against me with a choking cry. Frey stood in front of us, his sword raised, his face wild as he looked up at the looming

The hideous, abnormally huge coils could only be glimpsed in the mists beyond. But the giant spade-shaped head that hung above us was clear to our appalled vision. The enormous, opaline eyes were coldly brilliant as they stared down at us.

In that moment of stupefying horror, I recognized the intelligence in those unwinking reptilian eyes. This serpent of a bygone age had lived on for centuries in this land of eternal youth, with its master Loki and wolf Fenris. It had acquired an intelligence comparable with the human. A strange

mind shone from those coldly malignant eyes. "The Midgard snake!" Frev whispered.

"Jarl Keith!" Freya screamed to me.

The great head of the snake Iormungandr abruptly darted toward us. Frey struck out madly with his sword. I saw the blade slash into the scaly neck. But it caused only a shallow wound from which merely a little black

blood oozed.

The Midgard serpent recoiled, however. Its opaline eyes flamed with rage. From the jaws of the monster, with a terific hiss, came a cloud of fine green spray that flew toward Frey. He reled back, covered by that weird vapor. But I leaped forward, dragging him and Freya ahead. I saw our single chance. The momentary recoil of the serpent had left open the mouth of a corridor on the right!

"Quick!" I cried, pulling them to-

ward the black passage.

Frey seemed blinded by the green spray of the serpent. The monster's vast coils were twitching with rage, its head swaying angrily forward again. But we plunged safely into that branching corridor. It was utterly dark. As we stumbled forward in it, I heard a distant bable of alarm from the upper levels of the Jotun palace.
"The Jotuns will be after us," I cau-

tioned. "Loki will be warned of our escape."

"Jarl Keith, Iormungandr follows us!" Freya cried wildly.

The angry hiss of the giant serpent was echoing from the stone walls. And I could hear the loud rustle and scrape of its scaled body as it glided into the

dark passage after us.

No more than a few moments could have passed before we reached the end of the passage. But it seemed ages that we ran in blind, unreasoning terror. Slipping on the mossy, wet stone floor, we could hear the clamor of the far-off alarm grow louder and the hissing rustle of the Midgard snake overtaking us.

Then I collided with a metal door that closed the end of the passage. My heart throbbed as if it would burst as I clawed frantically for the knob. If it were locked, if we were trapped here

by the serpent-

Y hand found the catch, and I tore the door open. Outside was the open air. We stared at the night that was filled with curling white fog-

mists through which shone the ghostly Moon. I pulled Freya and the stunned Frey through and slammed the door shut behind us. The catch fell. Next moment, there was a loud thump against the other side of the door as the Midgard nake's huge head struck it.

We had emerged into one of the courtyards of the great palace. In the vague mists, the squat, brutal bulbs of Jotunheim's structures rose darkly all around us. But now torchlight was flashing from the upper windows of the palace as the alarm spread.

"Which way?" Frey mumbled thickly, gaping about in the shrouding mists, his sword in his unnerved hand.

"This way," I said decisively, leading them toward the left. "It's the next

court.

Then I heard the stamp of restless horses on the stone paving of an adjoining court. We ran forward. Frey was staggering like a drunken man as we burst into that adjoining court. Out of the mists loomed a Jotun guard, black-bearded, huge, his face a white blur in the fog.

blur in the fog.
"Who are you?" he challenged.
When he saw the fair hair of my two
companions, he uttered a loud cry.

"Aesir!"

He struck at me with his sword, but I He struck at me with his sword, an in with an upward thrust of my blade, slid past his defense, ripped between the laces of his brynja. He collapsed, the alarm bubbling through the blood that filled his throat.

I began running toward the vague shape of my rocket plane, which loomed out of the mist. But suddenly I remembered that the port window had been smashed when I had first landed on the sandy beach below Midgard's frowning cliffs. Flying in the cold, thin air of the Arctic, I might lose consciousness and crash into the sea. In any case, my hands would be too numb to handle the firing wheel.

"Hold the ship against attack!" I shouted to Frey, handing him the

guard's sword.

As I rushed into the cabin, I glimpsed him standing with the sword in had, but he was swaying drunkenly. I knew he could not hold off an attack for long, and I dragged on the flying togs I had discarded before climbing to Midgard plateau. The instant I strapped the oxygen tank to my shoulders, I heard Freya's terrified scream.

"Jarl Keith, Frey is swooning, and Jotuns are coming!"

I snatched a super-automatic from the supply compartment and dashed outside. The Moon slipped from behind the clouds, shining full on the Jotuns who were rushing up to attack. Horned helmet on his head, sword in hand and the golden mustache writhing above his savage lips, Loki was leading two fierce Jotun soldiers. But

"Jarl Keith, I cannot get him into the ship! He has swooned.'

I triggered a shot at Loki, saw him duck swiftly out of the bullet's path. Then I had no more time to fight. I hurled the gun and caught him on the right shoulder. The sword spun from his grip as he staggered back,

RANTICALLY I ran to the cabin door and dragged Frey inside. When I pointed quickly, Freya opened the door of the freight hold while I carried him in and laid him down on the floor. I wrapped him in blankets and

Stuart Rapidan, Sole Survivor of An Interplanetary Space Crash on a Satellite of Saturn, Fights for Survival as the Lone Inhabitant

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IN **SOJARR**

OF TITAN



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FEATURED IN THE NEXT ISSUE

Freya was struggling with Frey's al-most inert weight. The blade had slipped from his nerveless grasp.

"Get him into the rear of the ship and close the door!" I shouted to the girl.

The Jotun archer drew back the string of his bow to strike me down with a heavy arrow. I picked him off with a single snipe-shot. The pikeman raised his javelin, dropped it as a slug blasted away his skull. Before I could wheel on Loki and end the menace to the Aesir, Freya called to me in despair.

told Freya to do the same. It would be warmer and more easy to breathe than in the cabin, for the ship was electrically warmed and synthetically oxygenated. But the smashed window of the cabin would leak its own air and warmth, and chill and thin the air of the hold, despite the tightness of the door I closed on them as I sprang back into the pilot room.

Jotun reinforcements were charging up as I opened the jets wide and blasted off. The plane soared into the freezing air, and I was glad I had taken time to

don my flying clothes and oxygen tank. Even through my wired suit, I could feel the numbing chill, and my lungs were laboring under the lessened pressure.

Far below, I saw the glimmering river through the closing mist. The tall masts of Jotun ships looked like dowels. I twisted the firing wheel to top speed, and we rose so steeply that I thought the ship would slip into a tailspin. But it righted and zoomed higher, rocketing above the misty river and the dark, fogshrouded forests beyond. When I looked back, the ominous citadel of Iotunheim was alive with moving torches. I could well imagine the blazing anger that Loki woulld vent upon the Jotuns because of our escape.

"We're clear!" I thought exultantly. "Maybe by now Loki has more respect

for outland science.'

I set the robot controls and searched through the spare-parts compartment for a new window. Fixing the smashed port was only a few moments' work. Then I opened the oxygen nozzles wide and let the cabin fill with fresh, invigorating air and warmth. I removed my flying togs and opened the freight hold door. Freya and I helped Frey into the cabin, put him in a seat. His blurred eyes looked less helpless, and he sat unsteadily but without collapsing.

"Are you all right?" I asked anxious-

He nodded weakly.

"Truly you outlanders have strange powers," he mumbled. "We must warn Odin of the attack. . . ."

"Loki means to use those devilish

storm-cones to overcome the Aesir," I "We've got to devise some defense against that weapon." I went back to the controls and

guided the plane above Midgard's black hills. Freya's frantic voice called to me over the roar of the rocket motor. Jarl Keith, Frey has fallen!"

I whipped around. He was lying on the floor, twitching. Then I saw something that horrified me. His body was covered with the green spray which the Midgard snake had spat upon him. Around his bandaged wounds, his flesh was turning black!

The venom has entered his wounds!" I cried.

I had never thought that a snake the size of Iormungandr could be poisonous. No Earthly serpent larger than nine or ten feet possesses venom. But I had forgotten that Loki's science had developed it to its huge size.

Frey opened his fluttering eyes and stared dully at us. His lips moved

"I've fought my last fight, . . . The poison of the Midgard snake has slain

"Try to fight that venom!" I urged hoarsely.

"The Norns have spun out my long life-thread at last-" he mumbled. "I would that I could see Gerda before I pass. But Wyrd ordains otherwise." His blearing eyes grew strangely bril-liant and clear for an instant, "Jarl Keith, you have been a worthy comrade. I leave my kinswoman in your care, for I know you love her dearly. Try to save her in the day that approaches-the day of Ragnarok."

Freya sobbed as the Aesir's eyes dilated, as though looking past us at some

gigantic, terrifying spectacle.

I see Loki riding in fire and storm to destroy Asgard-I see the Aesir dying -I see the whole land-"

His eyes closed abruptly, and his jaw

sagged as his life departed.

REYA turned a quivering, tear-I stained face toward me as the plane thundered northward through the

Jarl Keith, he's dead. My kinsman was so great among the Aesir and has lived so long. Now he's dead."

I felt a hard lump in my throat, Handsome, steadfast Frey had been my first friend among the Aesir.

"We cannot help him now, Freya," I said. "Damn Loki and his fiendish schemes!"

"Aye," said Freya bitterly. kinsman is but the first of many Aesir who must fall because the arch-traitor has been loosed."

"And that happened only because I brought the rune key into Asgard," I said in heavy self-reproach. "I have been an evil guest to the Aesir, Freya."

She clasped my hand, "Don't think thus, Jarl Keith! It is not your fault that Loki's powers brought you and the fateful rune key here. Sooner or later, he would have accomplished it somehow. All my people always feared

that."

Dawn was paling in the sky. During the last half-hour, we had flown over most of the length of Midgard. Against the rose-flushed sky a few miles north of us stood the high, lofty little island of Asgard, with its eyrie of gray castles amid which Valhalla loomed mountainously. Already the flying arch of Bi-frost Bridge was glittering as the short polar spring night ended.

"We'll have to land on the field this side of the bridge," I mused. "There's not room enough to land safely in As-

gard."

I brought the plane down safely on the bare plain of the mainland promontory. As we emerged from it, over Bifrost Bridge from Asgard a long stream of Aesir warriors came galloping. At their head rode a yellow-haired, yellowbearded giant, his great hammer swinging.

"Thor has seen us and he comes!"

Freya exclaimed.

In a few moments, Thor and the Aesir warriors reached us. The horsemen seemed awed by sight of my flying craft.

"Jarl Keith and Freya!" cried the Hammerer, his small eyes joyful as he quickly recognized us. "But where is Frey?"

"Dead," I said bitterly. "Slain in Jotunheim by the poison of the Midgard snake."

Thor looked into the plane at the dead figure, as though unable to believe his ears. He whispered blankly:

"Frey, who has ridden and sailed by my side these many centuries—dead!" Wild rage crimsoned his face and he shook the great hammer Miolnir aloft. "Loki's work! Aye, these are the first fruits of that devil's freedom!"

"Loki prepares to lead the Jotuns upon Asgard," I warned him. "Tomorrow that host of dread evil comes against

us, Thor."

"Good! The sooner the better!" He turned to his Aesir warriors, who were still staring awedly at the plane. "Take the lord Frey and place him on a shield. He goes home to Asgard as a warrior should." A S Freya stood beside me, her blue eyes were bright with unshed tears as she watched them silently remove Frey's body and lay it gently upon a big shield. I put my arm around the girl comfortingly. But she did not weep now. The Viking strain was too strong in her. Though her red lips quivered, she watched steadily as the Aesir warriors lifted the shield that bore Frey's body.

We started back toward Asgard, following the warriors bearing the shield. Thor, Freya, the warriors and I walked slowly behind, leading the horses. We reached the promontory at the end of Midgard. When we started over the incredible, unrailed stone span of Bifrost Bridge, the sea was washing loud a thousand feet below us. And as we marched, the Aesir warriors behind us struck their sword-hilts against their shields in a clanging fumerl hythm.

Up the arch of the Bifrost Bridge we paced to the slow, sorrowful rhythm of that clanging. In the castle which guarded the Asgard end of the bridge, the great gates swung open for our entrance. And from the tower above the gates, we saw Heimdall blow a long, low, mournful note on the great Gial-

lar horn.

So we passed in the brightening sunnise through the gates into Asgard, ringed round by the castles of the Aesir nobles perched upon the cliffs, dominated by the huge pile of Valhalla. Inside the gates, a hastily gathered group of the Aesir met us.

Odin was foremost. The strong, stern face of the Aesir king grew taut and strange. His eyes clouded darkly as he saw the burden upon the shield.

"So Frey has fallen to the evil of Loki and his familiars," Odin muttered. "Now I know that Wyrd stoops low over us. The Norns spin out the end of their threads for many in this land."

"Frey and I did all we could to prevent the release of Loki, lord Odin," I

said. "But we failed."

"You could not succeed," Odin said broodingly. "It was written that Loki would be loosed. How soon does he come with the Jotuns against Asgard?"

"Tomorrow," I answered. "And he will be armed with his storm-cones to loose tempest and lightning on us." "We must prepare a defense," Odin declared. "Now bear Frey's body to his castle."

CHAPTER XIV

Thor's Oath

UR solemn little procession wound across Asgard, through the streets of stone houses, past great Valhalia castle. We moved miserably toward the castle on the eastern cliffs where Frey and his line dwelt. As we approached its entrance, the lady Gerda stood waiting to meet us. The lovely face of Frey's wife went pale as she saw the stiff figure on the shield. But she did not falter.

"My lord comes home for the last time," she said quietly in the deep si-

lence. "Bring him in."

Gerda walked beside us, her eyes fixed on Frey's dead form, as we entered the castle. We took him into the great hall of the castle, a high-roofed, big stone chamber. There the shield that bore his body was laid across wooden trestles that had been hastily

procured.

I tried to speak a word of consolation to Gerda, and could not. Her strange eyes seemed not to see any of us, but remained fixed on her dead husband. She had seated herself in a chair by the body. With hands folded in her lap, she stared wordlessly. Freya plucked my arm as I stood, swaying from exhaustion. The girl's eyes were bright with tears.

"We cannot soothe her grief, Jarl Keith," she whispered. "And you are weary to the soul. You must sleep."

"Aye, sleep," boomed Thor, his heavy voice rumbling ominously. "For tomorrow we shall need every arm in As-

gard."

I let thralls lead me to a small chamber in the castle. Hardly had I flung myself upon its hide bed when I was sinking into a slumber of utter physical and nervous fatigue. My dreams were troubled. Again I seemed to be facing Loki's beautiful face and the snarling wolf Fenris. Again I saw Frey confronting the venomous Midgard snake. And again, like a dim echo from far away, the dying gasp of Frey reverberated in my brain.

"I see Loki riding in fire and storm to destroy Asgard—I see the Aesir dy-

ing—"

I awoke with a shuddering start. The Sun was setting. I had slept through the day. A thrall had touched my shoulder to awaken me.

"The lady Freya bade me rouse you. It is time for the lord Frey's funeral."

I hastily donned my mail coat and helmet and buckled on my sword. Then I went down to the lower floor of the castle, and looked into the hall that was now growing dusky with twilight. Gerda still sat exactly where I had left her. Hands folded unmovingly, her lovely face was a strange, immobile mask as she looked at the body of Frey upon the shield.

Freya touched my arm. The girl had donned her own short mail tunic and helmet. Again she was the warriormaid I had first met. Her white face

was composed

"We give Frey burial now, Jarl Keith," she said. "The shield-bearers come. You should be one of them."

Thor, dark-faced, brooding-eyed Tyr the berserk, and sad, noble-looking young Forseti had entered. We entered the hall where Gerda watched her dead. "It is time, lady Gerda," said Thor

softly.

"That is well," she said in a calm voice.

E lifted the shield that bore Frey's body. Carrying it high upon our shoulders, we paced slowly out of the castle, Freya and Gerda following.

The gloom of early dusk lay over Asgard. A strong wind blew keen and cold from the northwest, wailing around the lofty cliffs. Warriors in companies of hundreds waited outside, clad in full armor. As we passed through them, they took up their place behind our cortege. They marched after us, striking their sword-hilts against their shields in that clangorous diree.

We wound along the edge of the cliff to the stair that led down to the fiord. At the head of the stair, on the cliff-edge, were gathered Odin and his lady Frigga, old Aegir and Ran, Bragi and all the other Aesir nobles.

"Farewell, Frey," said Odin. "You have gone first into the shades, but

others follow soon."

From the warriors who had followed us, from all the Aesir-folk, echoed that solemn sorrow.

"Farewell, lord Frey!"

Now we four started down the steep and narrow stati that was chiseled from the cliffside. Only Gerda and Freya followed us. The wind blew in great gusts, booming and moaning around the cliffs in the twilight. Thus we camedown to the deep, narrow ford in which floated the long dragon-ships of the Aseir. Among them, Frey's ship stood ready to give him Viking burial. It was trimmed and stacked with wood, and a low, broad wooden platform had been built amidships.

We stepped aboard and laid the shield that bore Frey's body upon that platform. Thor put Frey's sword in the dead hand. Then Frey's black horse was led into the bow of the ship. Tyr's dagger flashed, and the horse fell dead.

"Now all is ready," Thor rumbled.

We stepped back onto the shore.

"All is not yet ready," said Gerda calmly.

She stepped past us to the platform where her husband lay. When she looked down at him, her lovely face was strangely happy.

"For long," she said quietly, "my lord has lived with me at his side. He could not go on this journey into the dead without me."

Before any of us could move, she drew a dagger from her robe, and sheathed it in her heart. We watched rigidly as she fell upon the platform. Her golden hair fell across Frey's dead face.

Freya broke into wild sobbing and clung to me. We stared in horror and pity, but Thor lifted his great hammer in salute.

"Skoal to the lady Gerda!" he rumbled. "She goes proudly to death with her lord, like a true Viking."

Tyr slashed the mooring of the ship. Then he took a waiting torch from a socket, and tossed it into the resinous wood with which the ship was filled. The pile blazed up with a crackling roar, casting a red, quivering light through the deepening twilight. We bent our shoulders against the stern. The ship of death forged out on the heaving waves. Then, as the wind took its raised sail, it sprang forward like a thing alive.

BACK we climbed to Asgard, my arm supporting Freya. At the top of the cliff, we stood with Odin and the other Aesir. By the light of many torches, we gazed silently at the burial ship of Frey and Gerda. Blazing red with flames, its high sail carrying it before the swift wind, the ship drove south over the heaving black waves.

"Viking funeral, for a true Viking man and his mate!" Odin declared.

Thor raised his hammer into the air. His red face was even redder by the light of the distant fire ship.

"Thy spirit hear my vow, Frey!" boomed the giant. "It was slim! Dormungandr, Loki's evil snake, that slew thee. I swear to rid Earth of that Midgard serpent in the coming battle, or die myself. Wyrd binds me to that oath!"

The blazing ship that bore the bodies of Frey and Gerda was now far away upon the dark sea. A great torch of red fire, it was still scudding southward before the wind. Then we saw the ship's prow dip. The whole burning craft plunged down beneath the waves.

"So passes the lord Frey and his mate," said Odin's heavy voice in the silence that followed. "And now, jarls and warriors of the Aesir, we must prepare ourselves. The hosts of the Jotuns come upon the morrow, led by evil Loki, to destroy us."

"We hold Asgard safe while we live,

lord Odin!" cried Bragi.

All the voices shouted chorus. I, too, joined that shout, ferce desire for vengeance on Loki and the Jotuns burning in me strongly. Only one of us did not join in that fierce yell, and that was Tyr. The berserk still stood gazing out into the windy night, his dark, brooding face unfathomable.

"Tonight we hold feast in Valhalla as ever," Odin was saying. "Now I go to prepare that which may snatch victory from Loki's grasp. Son Thor, come you with me-and you also, Jarl

The Aesir king strode with Frigga and his stalwart sons, giant Thor, Vidar and Vali, back toward the black, looming bulk of Valhalla castle, The other Aesir nobles and warriors slowly dispersed toward their own castles and homes. I remained with Freya on the edge of the cliff. The chill darkness seemed alive with voices, with winds that boomed and wailed about Asgard's

cliffs as though bemoaning something to come. Freya crept into my arms. No longer was she the fierce, proud Viking maid who had watched the burial of her kinsman and his mate. A trembling girl, she felt even as I the shadow of colos-

sal disaster deepening with inevitable swiftness over us.

"Hold me close, Jarl Keith," she whispered. "I fear that when tomorrow night comes, we may be separated forever."

"No!" I exclaimed fiercely. "Whether living or dead, Freya, you and I shall be together."

N the darkness, her blue eyes shone up at me with bright tenderness. Her cold little hand touched my cheek, I kissed her quivering lips. We clung together in the frigid darkness, the moaning wind wrapping around us both the dark cloak I wore over my armor.

We could hear the tramping of feet. the clanging of hammers beating out spear and arrowheads, the bustle of activity as the warships below were prepared. All the stir of preparation was for the coming battle. Freya raised her bright golden head with proud gladness.

"Come Loki and all his evil hosts, come the end of Asgard itself, and I shall not weep now," she whispered tensely. "Beloved who came to me from beyond the ice, we are one till time ends." She stepped back. "You must answer the summons of lord Odin. We meet again at the feast tonight."

My heart was throbbing with pride and gladness as I turned from her and hurried across Asgard to Valhalla çastle.

CHAPTER XV

Down to the Fire World

DIN and Thor were waiting for me in the great hall of Valhalla. The stern, iron-strong face of the Aesir king was heavy. As he spoke, I could hear the bustle of preparation, the clatter of shields and spears and hurrying feet throughout the great castle.

'Jarl Keith, I shall not hide from you that Asgard is in dire peril. The Jotun hosts outnumber us by many to one. Though we might repulse them, if that were all, they will be led by cunning Loki and aided by the storm-weapons of which you spoke."

I nodded wordlessly, for all this knowledge had weighed on my own mind through these last hours.

"It is necessary, unless Asgard is to perish," Odin continued, "that I devise some defense against those stormcones. Otherwise they would blast our forces and make us easy prey.' "Can you prepare a defense against

them, lord Odin?" I asked hopefully. "I think I can," said Odin, gravely thoughtful. "I possess as much of the ancient science of our race as Loki, remember, though I have not probed into

unholy researches as he did. Tell me, what did you learn of the nature of his storm-cones?"

Rapidly I told Odin and Thor what Loki himself had related to me of those amazing devices. They could project a controlled electric field to any desired spot and cause an abnormal difference of electric potential between that place and the sky. The result would be a blasting discharge of lightning.

"Ah, I understand now," Odin muttered. "Loki has found a way to draw power from the static electric charge of Earth, transform and project it in a controlled field. Truly he is a daring scientist, as always.'

"Curse him and his devil's tricks!" growled Thor. "I always mistrusted him, even in the ancient days in Mus-

pelheim."

"Couldn't there be some way of creating an electric energy field that would screen out Loki's projected field?" I asked Odin eagerly, with great anxiety.
"You have divined the only possible
defense, Jarl Keith." Odin nodded.
"And I could soon build a mechanism
to create such a screen of energy. But
it would take tremendous power to operate it. Only controlled disintegration
of a large mass of intensively radioactive matter could yield such power
as that."

"You said once, lord Odin, that there are tremendous masses of radioactive matter in the deep world from which

the Aesir originally came."

Odin's stare narrowed. "Are you suggesting that we could get the radio-active substances from Muspelheim?"

"That's my idea," I stated. "You told me that there was a way down into Muspelheim. It was a way by which the Aesir originally came up, and which Loki later used for his researches in

the atomic fires below."

"It is true," Odin said slowly. "There is such a parh down to Muspelheim, though it is a perilous and fearful one to follow. The opening to that path is in the deepest chamber of this castle. When we emerged here long ago, we built Valhalla over it. And it is the same way that Loki used to descend and tamper with the atomic fires below, until we discovered what he was doing and banished him.

"But it would be deadly dangerous for anyone to go down that way to Muspelheip and seek to bring back radioactive matter. For that deepburled world is a place of awful, raging atomic fires. The terrific radiation is such that it streams even up through Earth's crust into this land."

"I know, but a lead garment of suffi-

cient thickness would protect me from the radiation," I said earnestly. "I know that from my own science. Let me go on this mission, lord Odin!"

E hesitated. "The lead suits which Loki used for his secret descents into Muspelheim are still here." he muttered. "It might be done, Jarl Keith. I will go with you on this perilous trip."

But Thor shook his great, shaggy head.

"No, Father, you must not go," the Hammerer declared. "You must be here to take command if Loki's forces attack before tomorrow. And you will also need all the available time to build the mechanism of which you and Jarl Keith speak." He turned to me. "I will go with Jarl Keith down into Muspelheim."

Odin reluctantly assented.

"So be it, then, though I dislike to send you, Jarl Keith, upon this fearful mission. The fight is for the sake of our people, not yours."

"The Aesir are my people, now and always, if you will let me claim that

privilege!'

Odin's iron face softened, and he laid his great hand on my shoulder.

"Jarl Keith, I welcome you as one of us. Weal or woe, life or death, you are outlander no longer, but jarl and captain of the Aesir."

Hard-headed American scientist or not, I felt pride such as I had never felt before, to be accepted into the company of these mighty men.

"Now go we down to the chamber that holds the mouth of the terrible

[Turn page]

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STRANGE STORIES

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road to Muspelheim," Odin said.

"Come!"

Thor and I followed him out of the great hall and through corridors. We descended dark stone stairs until we reached the deepest level of Valhalla castle. We came to a door carved with runes, and with a great lock upon it. Odin touched the runes in a certain combination, and the door swung slowly inward.

By the light of the torch Thor carried, I saw that we had entered a round stone chamber of considerable size. If was dank and dusty, as though unused for ages. Standing about were dustcovered instruments and mechanisms of copper, quartz and iron, which I guessed were long unused devices of

the ancient Aesir science.

In the very center of the big chamber's stone floor yawned a pit fifty feet in diameter, sinking to unguessable depths. Up from that opening beat a ferce green glow of throbbing force, from somewhere far beneath. I heard a dim, remoter, roaring sound.

Most strange of all, in the opening of that pit floated a twenty-foot disk of white metal, with a squat, thick standard of metal rising from its center. It poised in the radiation, apparently without support, rocking gently as the ferce green rays from below streamed

up through it.

"What in the world is that?" I asked

startledly.

"That is the chariot on which you and Thor will ride down the road to deep Muspelheim," Odin explained. "And yon pit in which the disk floats is the road itself."

DIN looked somberly about the dusty room and its looming, enigmatic mechanisms.

"This is the very heart of Asgard, Jarl Keith. Up that pit-road the Assir came long ago, fleeing from disasterstricken Muspelheim. Over the opening of this road I caused Valhalla castle to be built. And secretly, from this chamber, Loki came and went to Muspelheim in the perllous researches that caused his exile, using the floating disk which he had devised to come and go easily."

Thor was looking in obvious dislike

at the metal disk that was rocking eerily in empty air at the edge of the pit.

"I've not ridden that disk since we caught Loki in his secret researches," rumbled the bearded giant. "I've not much desire to repeat the trip, but I suppose it has to be done."

"Here are the lead suits, Jarl Keith," called Odin.

I went to the side of the chamber to which the Aesir king had gone. He had reached down, from hooks on which they hung, two of the four strange garments which had hung there, gathering dust for long. The garments were stiff robes of heavy but oddly flexible lead, falling to the ankles, with leaden boots for the feet and leaden gloves for the hands. A hood-like cowl of the same material went over the head, and had two eye-holes of heavily leaded glass for vision.

"These are the suits which Loki and the thralls he forced to help him used in the fiendish researches below," Odin said. "When Loki was forced to flee Asgard, he had to leave these behind

him."

I examined the heavy garments. "They ought to be proof against any

ordinary radiation," I muttered. "But we've got to have something in which to bring back the mass of radioactive matter."

Odin nodded understandingly.
"Yon crucible should serve the pur-

pose. Put it on the disk. Thor."

The crucible was a big one of lead, and so heavy that even huge Thor grunted as he lifted it. He staggered with it to the floating disk. It rocked a little as he put the crucible on it, then quieted. Thor and I each donned one of the protective suits. The lead garments were so heavy that I felt crushed, and I could see only dimly through the dark glass of the eye-holes. Odin handed each of us a stout iron staff.

"Thor, you know from long ago how to operate the disk," he told his huge son. "While you are gone, I shall begin converting one of these mechanisms into a generator whose energy may screen us from Loki's storm-cones in

the coming battle."

"We'll get the stuff to operate that generator, or not come back," I promised.

The Aesir king's iron-strong face was anxious.

"I pray the Norns that you return

with it, Jarl Keith."

Thor had stepped out onto the floating disk. I followed, moving stiffly in my hampering garments, and feeling more than a little uneasy as I boarded the disk which floated in empty air.

"Crouch by the standard with me, Jarl Keith," came Thor's muffled voice.

'Cling to the hand-grips."

FOLLOWED his example and crouched down beside the squat pillar which rose from the center of the disk. Upon that pillar was a single lever, movable in a graduated slot, which seemed to be the only control of the strange vehicle. There were projecting hand-grips on the pillar and across the whole disk, for passengers to cling to. Thor's lead-gloved hand clutched the lever and moved it slightly. It operated a simple mechanical device which slid open scores of tiny doors in the disk, which until now had been half-open.

At once the disk began to fall into the pit. Faster and faster we fell, the air whistling around us, and the blazing green radiation streaming violently up through the many tiny openings in the

"How in the world does this thing operate?" I shouted to Thor over the roar of air. "Is it by radiation-pressure?"

I heard his muffled answer. "You have guessed it, Jarl Keith. The metal of this disk is one that is extremely light and opaque to radia-The pressure of the radiation from below is so terrifically powerful as to drive the disk upward. By opening the little doors and controlling the radiation through the disk, the vehicle can be poised motionless against the

pressure, or caused to fall." Certainly Loki is a clever scientist, to have devised such a thing," I de-

Thor growled an answer, but I could not hear. The whistling wind and din, thunderous roaring from far below were growing louder. We were falling at an appalling speed, straight down the pit. It was a ride wild beyond imagination, with the air shricking like fiends, and the fierce green rays streaming up around us. Through every fiber of my body, even though I wore the protective lead suit, tingled stronger vibrations of the stimulating force I had felt since entering this land. It was wildly exhilarating and intoxicating.

Thor's big, lead-clothed figure crouched, his gloved hand on the control lever. His cowled head was bent as he peered tautly down through a square quartz plate in the bottom of the disk. A giddy sensation akin to nausea shook me, so swift now was our fall.

"We approach Muspelheim!" came Thor's bellow over the roar and shriek.

"Hold tightly, Jarl Keith!"

His hand moved the lever in its slot. The tiny doors in the bottom of the disk closed a little. Our fall began to slow. Pressed hard against the disk, crushed by the deceleration, I peered down through the quartz view-plate with Thor. The end of the vertical pit was close below. I saw, beneath it, a vast, fiery space.

The disk slowed further, as Thor moved the lever. Finally it hung motionless again, its weight just balanced by the pressure of radiation from below. It had halted just where the vertical pit debouched into the roof of an inconceivably vast, blazing space. An underworld of terrible atomic radiance stretched away for miles from the rock wall beside which the pit entered.

"You look upon deep Muspelheim." Thor's voice reached me muffledly. "Once the home of the Aesir, it is the home now of the atomic fires and the

creatures of the fires."

THE scene before me was indescribably awe-inspiring. The vast dimensions of this mighty space beneath Earth's crust were enough to stagger the mind. This was no mere cavern, but an enormous hollow such as many have believed was left under the planet's surface by the hurling forth of the Moon.

The rocky roof was a mile above the floor. Our disk had halted just where the vertical pit entered the roof, close beside one rock wall of the great space. From the spot where Thor and I gazed, the subterranean world stretched off

out of sight, to right and left and ahead. Many miles away from us there

Many miles away from us there shone a dazzling thing that dominated the whole vast, blazing fane with its brilliance. It was a colossal fountain of cold, white fire that gushed from a chasm in the floor. Hundreds of feet into the air it rose, falling back on itself in continual blinding spray. From it shot beams and banners of blinding light and force, a shaking, shuddering radiance.

All across the underworld rose similar but smaller geyers of white fire, gushing jets of radiance like that mighty distant one. Wherever the eye turned, it encountered such fiery fountains. They filled the underworld with a roaring that was deafening, and a terrific green-white radiance.

"Can your people ever have lived here?" I cried shakenly to Thor, as I gazed stupefiedly from the floating disk.

"Aye, Jarl Keith. Centuries ago we dwelt here, where we had evolved and lived for ages. But then this was a fair world. There was no fire except that one great atomic fountain which you see far away. It was smaller then than now, yet its radiations were sufficient to keep this whole underworld warm and habitable.

"Then accursed Loki tampered with our fire fountain. He sought to stimulate it to greater activity, so that its increased radiations would make us almost immortal. He so disturbed and aroused the fountain that its fires shot up and fell here and there, all across the underworld. Eventually it set masses of radioactive matter everywhere to blazing up in atomic flame themselves.

"Thus we had to flee from disastersmitten Muspelheim. We managed to pierce the pit up to the upper world, and clambered up it by a tollsome stair carved in its side. And since then Muspelheim has been a world of fire, forsaken by men."

I was so stunned by the awesome spectacle that I had almost forgotten our mission here. But Thor recalled it to me.

"We must not stay here long, Jarl Keith!" he warned. "The awful radiation here would slay us if it penetrated our leaden suits." I glanced down,

"There must be plenty of radioactive matter here, all right," I said. "But how do we get down to the floor?"

"By this stair. It's part of the ancient way by which my people escaped to the upper world."

I saw now that the disk had halted beside the landing of a stair which was chiseled from the rock wall of the underworld. The stair climbed up from the floor and disappeared into the pit-

shaft by which we had descended. Hastily, fully awakening to the peril of remaining long in this hell of ferce radiation, I helped Thor pick up the leaden crucible we had brought. We stepped from the disk to the landing, and started down the stair. It was hard walking in our stiff lead garments, and with the weight of the crucible to carry. Moreover, the stair was without any protective rail, and perilously narrow.

CHAPTER XVI

Creatures of Flame

WHEN we reached the floor of the underworld, we stood within a hundred yards of one of the many geysers of atomic fire. Though half-blinded by its brilliance, I was able to see that it jetted from a mass of radio-active mineral whose normally slow disintegration had been tremendously accelerated. It had been kindled to this faster disintegration, I knew, by the flame that had fallen from the central foountain.

"We shall have to find a radioactive deposit unkindled as yet," I called to Thor.

Thor.

He nodded his lead-cowled head vigorously.

"Let us try this direction, Jarl Keith."

We stumbled with the crucible between the geysers of atomic flame. Sometimes we were forced to go so near one of the jets that its inconceivable radiation seemed bound to penetrate our suits. Dazzled even through my lead-glass eyeholes by the raging brilliance, every fiber of my body tingling, I searched desperately for such a deposit as we required. If our suits should be penetrated, we would die horrible deaths.

"This way, Thor!" I called suddenly as I found a mass of mineral in a niche

in the broken rock floor.

It was glowing with a soft light that seemed feeble in comparison with the flaming atomic fountains. I recognized it as an isotope of radium itself, never found in a natural state in my own upper world.

own upper world.

"There's more than enough of the stuff here, if we can dig it out!" I ex-

claimed, "We'll have to use our staffs." The iron pikes we carried were illadapted to digging out the hard, glowing mineral. But we set to work, prying out chunks of the stuff and tossing
them into the crucible. As I straightened once, panting for breath, I
glimpsed an amazing sight in the middle distance.

Around one of the geysers were circling and flitting a dozen things that looked like swirling spheres of flame, with coiling, brilliant tentacles of light.

"Those things look as though they were alive!" I yelled in horror.

Thor straightened to see.

"Flame-children!" he exclaimed, his muffled voice suddenly anxious. He turned to me hastily. "They are alive, in a way. But it is not life like ours. They are creatures evolved somehow from the flaming radiation of this underworld of atomic fires. We believe they consist of force currents that cohere in a permanent pattern, which possess powers of movement and perhaps dim intelligence. We don't know much about them, for they've evolved here since the Aesir left poor Muspelheim."

"They look beautiful, like flamewinged birds of light," I said, staring

in awe and fascination.

"They're dangerous, Jarl Keith pure concentrated atomic energy!" warned the Hammerer. "We must be

gone before they find us."

I redoubled my toil of helping to dig out the radioactive chunks. We had the crucible half-full of the precious mineral when I felt a terrific shock of force against my back. I whirled around, uttered a cry. One of the dazzling flame-children was poised behind me, had just touched my suit. The mere touch of the weird creature had burned almost through the thick

lead

"We've got to get out!" Thor bellowed. "The thing has almost pierced your suit. The radiation will penetrate it in a few minutes, and you'll die horribly."

"But we haven't all the radioactive matter that Odin will need," I pro-

tested.
"We have most of it. If you perish
here, we'll never get even this much
back to him. Quick, up the stair to the
disk!"

Reluctantly I took the other handle.

Reluctantly I took the other handle and started with him toward the stair. As we hastened with our heavy load between the roaring geysers of atomic fire, I looked back. The one of the flame-children that had touched me experimentally was now joining several other dazzling creatures like itself, and drifting after us.

Hastily we started up the stair. With some relief, I saw that the flame-children did not follow us, but drifted on and started circling and flitting around another of the fire fountains. Apparently the dim intelligence of the creatures, if indeed they possessed any, had lost interest in us.

Panting and exhausted, we reached the landing and set the crucible down on the floating disk. Thor hastily adjusted the control to make up for the increased weight on it. As he crouched down, preparatory to starting up the shaft, I noticed something.

"Thor, what is that door up there,

high in the roof?"

He turned his gaze to follow my pointing finger. The door looked like a massive sliding sheet of dull metal, set in the roof of the underworld some distance from us. There was a shielded mechanism of some kind set in the rock by the door, obviously controlling its controlling in the set of the se

"That is the forbidden research upon which Loki was engaged, and which caused us to banish him from Asgard," Thor explained. "Above that door is a tunnel connecting with the sea of the upper world. If the door were opened,

sea water would rush down into this underworld."

"Good lord!" I cried in horror. sea water ever poured down into this world of fire, there'd be an explosion that would shake the planet!"

"Aye, and Odin saw that danger," "Loki planned to admit Thor said. only enough sea water to produce the titanic power of which he had need in his experiments. But Odin pointed out that if anything went wrong-if this door were completely opened and the sea rushed down unchecked into Muspelheim-there would be such an explosion as would rend the whole land above. It was the reason for Loki's banishment."

As Thor spoke, he was moving the control lever. The floating disk began to rise in the vertical shaft, out of the fiery underworld. With all the tiny valve-doors closed, it rose quickly under the pressure of the powerful radiation. We shot up the dark shaft at a speed that almost equaled that of our descent.

We were none too soon. A savage pain in my back told me that the radiation had just been starting to penetrate my weakened protective garment. Already it had scorched my flesh!

Clinging to the rocking, rising disk, I held the crucible to keep it from sliding away. The radioactive matter in it shed a feeble glow upon the dark walls of the pit as they raced downward. Then Thor slowed our rise, and finally the disk came to a halt at the mouth of the shaft. Again we were in the torchlit chamber under Valhalla castle.

DIN was awaiting us. The Aesir king uttered an exclamation of relief as Thor and I stumbled off the disk with the crucible and removed our stiff garments.

"Lord Odin, I fear we didn't get all the radioactive fuel you'll need for your mechanism," I said bitterly. "It was my fault that we were forced to leave-"

Odin looked with a shadow of worry in his eye at the half-filled crucible. But he spoke confidently to me.

"It should be enough, Jarl Keith, to defend us from Loki's storm weapons. See, I have converted another mechanism into such a generator as we will need for that defense."

The mechanism was concealed by a spherical copper cover upon which was mounted a smaller copper ball. There was a hopper in its side, into which we poured the chunks of glowing mineral,

"It should have power enough to maintain a defensive screen against the force of Loki's storm-cones for a short time," Odin said. "If he should use the storm-cones for longer than that-

He did not finish, but I shared the deep worry that was etched in his strong face.

I saw Loki's handiwork below," I said, and described the sliding door in the roof of the fire-world, which Loki had designed to admit sea water. "No wonder you cast Loki out for such a terrifically dangerous plan."

"Ave, it was Baldur who discovered that plan, and was slain by Loki for exposing it," Odin said somberly. "Loki had perfected a remote control for that sliding door, operating by tuned vibration. Here it is,"

And Odin showed me, among the many dust-covered instruments in the chamber, a small, square, silver box. On it was mounted a knob whose pointer could be turned along a semicircular scale.

"Turning this knob would open the sea-door a bit or wide," the Aesir king said. "When Loki fled from Asgard, he took this control box with him. And when we trapped him in that cave below Midgard, and were about to kill him, Loki threatened to open the seagate wide and destroy us all. That was why we had to agree not to kill him, if he would surrender this control box to us. He did surrender it. We kept our word and did not kill him, but placed him in the suspended animation in which he lay for so long."

Odin went to the door and called up through the corridors for some of his thralls to come. When they came, he bade them carry out the big spherical copper generator.

"We shall place it on Vigrid field, on the mainland across Bifrost Bridge," he said, "and keep it under guard tonight. For it is there that we must make our stand against Loki's forces when they come in all their fury," He, Thor and I followed the thralls as they bore the heavy mechanism through Valhalla castle and out into the windy, gusty night. Torch-bearing thralls went ahead to illuminate the way. Lights shone from all the castles of Asgard. The Moon was hidden by driving clouds as we moved in a little torchlit group across the giddy span of Bifrost to the flat field on the opposite

promontory.

Y plane was still where I had landed. Aesir warriors and mounted scouts were on guard, watching toward the south for the first approach of Loki and the Jotun horde. As Odin directed the placing of the copper mechanism, I went to my plane. Something had occurred to me which might enable me to devise an additional weapon for the coming battle.

In the plane were the half-dozen big signal rockets which were to be used in case I made a forced landing and had to summon help. I began taking the rockets apart, pouring out the gunpowder in them, and carefully unfixing the detonators. At the end of a halfhour, I had made three crude handgrenades or small bombs. I hoped they might be of some use against the Jotuns, who knew nothing of explosives. I left the bombs in the plane and emerged to find Thor waiting for me. "My father has already returned to

Asgard," the Hammerer told me. "And it is time we followed him, for our nightly Valhalla feast begins soon." Thor, what of tomorrow's battle?"

I asked. "If it comes to sword and spear, with the Jotuns outnumbering us many times, what can we do?" "We can triumph or we can die!"

boomed the giant. "And if it is death-Well, the Aesir have lived long and are not afraid to die, so long as we take our enemies with us." He tossed his great hammer in the air and caught it in outstretched hand, as though it were a "Be not impatient, willow wand. Miolnir. You'll not thirst long. And now to Valhalla, Jarl Keith."

Valhalla was blazing with torchlight when we entered it. Logs in the great hearth burned high. In the flickering torchlight, all the captains and great warriors of the Aesir were gathered at the many tables. The Aesir nobles were appearing, striding toward the high table on the dais. I took my place beside Freya. Beyond her were the two empty seats of Frey and Gerda, then Bragi and Idun, old Aegir and his wife, and brooding, silent Tyr.

Odin and Frigga entered, and we all stood up. The Aesir king's eye sur-

veyed us with stern pride.

"Be seated, jarls and captains," he boomed. "Let us eat and drink as of old. Though war and death surge upon us tomorrow, yet is there no fear in our hearts."

"Skoal to Odin!" rang Forseti's deep voice.

We seized our drinking-horns and raised them high to a crashing shout of confidence and pride.

"Skoal to the king!"

We drained the mead and sat down. The tall serving-maidens hastened to bring us more drink and meat. The din of voices and laughter rang forth. loud as ever. The deepening shadow of dire disaster which lay over Asgard that night intensified, rather than lessened, the merriment of the feast. Horn after horn of the sweet, potent mead we drank.

ESIDE me, Freya's blue eyes clung to my face. The shadowed tenderness and love in them was more heart-stirring to me than all else.

"Come good or ill, Freya," I whispered, "it is worth having lived to sit here tonight with you and your people.'

"Aye, Jarl Keith," she replied. But there was wistfulness in her voice as she added: "I would that I could foretell our sitting here again tomorrow."

Suddenly all the cheery voices died. Into the hall strode tall Heimdall,

warder of Asgard's gates.

"Why are you here, Heimdall?" Odin asked. "It is not your task tonight to watch over Bifrost Bridge, and sound the great blast on Giallar horn when the enemy approached?"

"Lord Odin, Loki has sent a herald to us," Heimdall answered. "That herald, the Jotun king Utgar, I have admitted under truce. He waits to enter."

Fierce passion leaped into every face as the men reached for their weapons. Thor raised his great hammer menacingly, but Odin spoke with stern calm.

"Let the herald of Loki enter."

Utgar came alone into Valhalla's blazing torchlight. Yet the big, black-bearded Jotun king came swaggering, bearing himself like a conqueror as he strode up to our table where the nobles of the Aesir sat.

CHAPTER XVII

Battle of Science

TGAR'S brutal face showed no sign of fear as he met the fiery gaze of his deadly enemies. He spoke to Odin, his coarse, rasping voice loud with utter confidence.

"I bring a message from the lord Loki, ruler of Midgard and soon to be ruler of Asgard."

A fierce exclamation went up from every throat. But Odin's stern face did not change as he replied.

"Speak Loki's message."

"These are the words of Loki," Utgar said loudly, "Odin and the other Aesir, the time of your downfall has come. I, when you cast out long ago, whom you prisoned for centuries, am now free and thirsty for vengeance. Tomorrow I come against you with the Jotuns. We shall have three warriors for each warrior of yours, three ships for each of your ships. You cannot stand against

"'But because I was once of your blood, I shall offer you your lives. If you swear to submit to me as your ruler, if you become my subjects as the Jotuns are and crown me your king in Valhalla hall, then shall you retain your lives. Think well before you refuse this offer. If you refuse it, I shall utterly destroy you all.' These are the words of Loki. What answer, lord Odin?"

"I'll answer now with Miolnir!" Thor roared, rising with crimson rage on his face.

A fierce chorus of yells from every throat there, including my own, seconded his cry. But Odin waved us to silence. He spoke slowly, solemnly, gazing gravely down at Utgar.

"Take this answer to Loki, Jotun. Tell him that he knows well the Aesir will never yield to his demands. We will fight until our swords break in our hands, until our hands be shorn away, until our breath is no more in us. But we will not take back among us the murderer Loki who long ago proved traitor to our race.

"And tell Loki this also, Tell him that he shall never—even though he and his Jotun hosts utterly overcome us—reap profit from his work. For I say that before that shall happen, all this land will quail beneath destruction. Flame and death shall eat up Midgard and Asgard alike, and all the Jouns and the Aesir. Tell the arch-traitor that!"

Involuntarily Utgar recoiled from the dark, dreadful menace in Odin's voice. Then the Jotun king drew his huge figure sconfully erect.

"Think not that our lord will be frightened by such words," he retorted. "You have asked for doom, and doom you shall have."

He turned to go, but Tyr, the brooding berserk, stepped in front of him. "You know me, Utgar," said Tyr in a

slow, bitter voice. "Look for me in tomorrow's battle. I will look for you." "Come and find me, then, Aesir," laughed Utgar savagely. "Too long have I heard of your valor. Tomorrow

I'll test it with my sword."

Utgar strode proudly out of the hall,
Heimdall following. In the silence, we
heard the Jotun king gallop across As-

gard to Bifrost Bridge.

"Let the feast go on," bade Odin at last.

Drinking commenced again, the ferce babel of voices arising. My head spun from the mead that I had drunk as the hours went by. Freya sat silent, close inside the circle of my arm, looking up ever and again at my face. I saw Odin brooding as he watched his people make merry on the brink of dreadful war. Pride in these Aesir, gratitude that they allowed me to be one of them, filled me.

The first light of dawn began slanting through the windows. Bragi stepped forward with his harp, and all voices died as the gentle-faced skald touched the quivering strings. clear voice rang martial-loud through Valhalla.

> Now comes the great hour When Norn-spinners gather The fate-threads of warriors Of Aesir and Jotun. Now Wyrd's dark daughters Make ready the battle, The struggle long fated Twixt darkness and light.

Bragi sang on, firing the blood with the stirring strains. And when he had finished, a tremendous shout of applause roared from us all. As the echoes of our shout died, there came on their heels from far away the low, long reverberation of a horn-blast.

Louder and louder it grew as we listened in tense silence, waxing until the deep, tremendous note of that mighty trumpet throbbed through every corner of Asgard. Then it fell and died away.

"The great blast of Giallar horn, Odin said with quiet sternness. "Heimdall warns that the hosts of Loki approach."

We sprang to our feet. Odin's voice rang in quick command.

"We go forth to meet them. On the field Vigrid, on the other side of Bifrost Bridge, we will await them. Gather your men and horses. Aegir, you and Niord command our fleet! Put out with all our ships and lie off Asgard, until you see along which coast the Jo-

tun fleet comes."

With a yell, the Aesir nobles and captains poured out of Valhalla. Trumpets blared out in the dawn, and there was the thunder of galloping horses, the clanking tramp of marching men hurrying up, the roar of orders shouted loudly. I remained in the almost empty hall with Freya, Odin and his family. The Aesir king was putting over his mail brynia a silver emblem carved with runes.

TIDAR, the tall second son, brought Odin's great sword, and the king buckled it on. Thor, his little eyes blazing with battle-light, was swinging great Miolnir in the air, giving a last test to the strength of its helve.

Odin looked into the beautiful face of

the lady Frigga.

"Farewell, my wife," he said in his deep voice. "We come back victors or dead men, as Wyrd wills it."

I had taken Freva into my arms. Almost fiercely I held her bright head between my hands and kissed her. Bright sunbeams from a window lit her hair to dazzling gold as I released her. Her blue eyes looked up into mine without a shadow of fear in their proud depths.

Tarl Keith, I must remain with the women instead of riding by your side as I would wish. But my heart goes with you. I am proud that you from the outlands fight today beside my peo-

"Your people are mine, Freya," I answered. "It was I who brought the key that loosed Loki. I can only atone for that by fighting against the devil

today. Odin was striding toward the exit of the great hall. I tore myself from Freya and followed with giant Thor, Vidar and Vali. We emerged from Valhalla castle into the bright day. Before us were massed the warriors of Asgard, helmets and mail gleaming in the Sun. Three thousand horsemen and five thousand footmen they numbered, their jarls and captains sitting their horses at the head of the men.

A great shout greeted Odin as we emerged. Thralls held our horses as we swung into the saddles. Thor vaulted heavily onto his great black stallion. Odin raised his hand high and shouted ringingly:

To Vigrid!'

We spurred forward, the king, his sons and I galloping at the head of the massed horsemen. Across the city Asgard we rode, toward the castled gates of Bifrost. They swung open as we approached, and Heimdall, warder of the gates, was waiting for us on his own steed.

The guards on the tower above again sounded the great, throbbing blast of Giallar horn as we rode through the gates and onto the bridge. With Odin leading us, our horsemen streaming out in narrow file with armor shining gold in the dazzling Sun, we galloped up the arch of the rainbow bridge. Like thunder clattered our horses' hoofs on that flying arc of stone.

Far below us raged the green sea between Asgard and Midgard. Far back to our right, from the eastern cliffs of Asgard, the Aseis ships were putting out to sea under Aegir's command. Forty big dragons of war, square sails raised to the wind, brazen beaks dipping into the heaving waves, they quickly moved out to await the coming of the Jotun fleet.

WILD exultation was throbbing in me like wine as we rode down the descending arch of Bifrost Bridge. I had forgotten that I was Keith Masters of the outside world. I had forgotten everything except that I was one of the Aesir, that I was to fight beside them for Freya and for Asgard against the savage hosts of evil Loki.

We halted on the open, rocky plain that lay at the northern extremity of Midgard. Behind us arched the rainbow bridge leading to Asgard. In front of us, beyond the flat field Vigrid, extended the dark, forested hills of Midgard. Odin had halted us beyond the hillock upon which his spherical copper generator stood, and near which my plane was parked.

"The footmen will mass in our center under Vidar," Odin ordered. "Half our horsemen on the left wing under Thor, and half on the right under Heim-

dall."

By now the infantry was streaming across Bifrost Bridge in dense, long files, archers, and spearmen, and swordsmen. Thor bellowed the orders that drew them and the horsemen up in front of the little hillock. Odin had dismounted and climbed the hillock to his generator, and I followed him. Finally Thor, having completed the disposition of our forces, rode up the hillock to where the Aesir king and I were examining the generator.

"They come!" boomed Thor, pointing southward with his gleaming ham-

mer

We peered intently through the bright daylight. From the south, the glitter of a forest of helmets and spearpoints flashed in the Sun as a dense mass of Jotun soldiery advanced along the cliff-edge, screened by horsemen. Far out on the sea to the right, a great fleet of dragon-ships was sailing northward. There were at least a hundred of the black Jotun long-ships, and the Aesir vessels were advancing to meet them. In the south, a growing darkness was clouding the heavens. A strange dusk was creeping up rapidly across the brilliant sky.

"Loki's storm-cones!" I shouted. "See where he has set them up on that

crest, lord Odin!"

I pointed. Southward, well behind the advancing Jotun army, rose a crest. Upon it was a small group of clustered objects that gleamed in the last rays of the half-obscured Sun.

"Aye, I see," Odin said in his deep voice. "Loki prepares to loose his lightnings upon us, as we feared."

The Aesir king began to manipulate the enigmatic controls of his big spherical generator, to throw up a defensive screen. The wind was moaning around us with increasing force as the darkness spread rapidly across the sky. The gloom seemed to boil up visibly from the distant crest where Loki had his storm-cones, and from which he was spraying a terrific electric field to unlock the tempest.

Down in the sea beyond the cliffs, the dark waves were churning ever higher. They and the shrieking winds were wildly tossing the Jotun and Aesir ships that maneuvered swiftly for battle.

Crash!

UT of the night-black sky, a blazing flash of white lightning had struck amid our massed footmen. It left a heap of scorched dead. On its heels came another blinding bolt that blasted three horsemen.

"Lord Odin, Loki's lightnings begin to slay my men!" roared Heimdall from the right wing. "Let us charge them!" "Wait!" Odin called, undismayed.

At the same time, the spherical copper generator began to throb with power. The radioactive matter in it, which Thor and I had procured with such risk from deep Muspelheim, was breaking down into pure power. The energy was being transformed into a radiant shell of power that was broadeast from the smaller copper ball atop the generator.

Up into the storm-nighted sky,

Odin's mechanism flung a great halo of glowing light. The halo that tented our forces stopped the blazing lightning-bolts that had begun to decimate us! Those blinding flashes hit the halo and splashed harmlessly upon it.

"It shields us from Loki's stormcones!" I cried jubilantly. "We've neu-tralized his best weapon!"

"Wait, Jarl Keith, before you exult," warned Odin. "There is not enough radioactive fuel to operate this mechanism much longer. When it stops, Loki's lightnings will play yet greater havoc with us.

"Can't we charge with all our horsemen and destroy Loki and his devilish weapons?" Thor cried fiercely.

"As soon as we leave the defense of this generator's screen of energy, Loki's lightnings will cleave us," Odin

replied.

I realized the desperate nature of the emergency. If the Aesir and the Jotuns were to fight this battle on anything like even terms, Loki's stormcones must be destroyed! Even if they were, the Aesir would be facing overwhelming numbers. But there would be a chance for victory, at least, whereas there would be no chance at all if Loki's forces were not checked.

In this emergency, my eyes fell on my plane parked some distance to the rear of our forces. Suddenly I remembered the bombs I had made the night before, for possible use in the battle.

"Lord Odin, I think that I may be able to destroy Loki's weapons!" I cried eagerly. "In my flying craft I have a weapon of the kind my people use in war. Let me try it."

"Can any flying ship live in this tempest?" the Aesir king asked incred-

ulously.

I wondered, too. The storm that raged over this strange battlefield had now become chaotic in its insensate fury. From all the black sky over us, bolts of lightning induced by Loki's storm-cones were sizzling and flashing down. Though they were splattering on Odin's defense screen, the mounts of our horsemen were rearing wildly. Our warriors were white-faced in the light of the flashes. In the south, the mighty Jotun army was forming up to advance against us.

"I can make it!" I persisted without conviction. "I'll circle back around the worst of this storm."

"Then go, Jarl Keith, and the Norns guide you," Odin said reverently.

CHAPTER XVIII

Battle for Asgard

RACED back toward the plane. In a moment I had the rocket motor roaring, and then I managed a perilous take-off from the field. Raging winds, blowing now in this direction and now in that, threatened to hurl my rising plane back to the field. Sheets and flares of blinding lightning dazzled my eyes. But I rose and zoomed out over the sea, to circle back and approach Loki's position from the rear.

I hurtled through the unnatural darkness over the water. Lightning flares gave me a momentary glimpse of Aesir and Jotun ships locked in death-combat down on the wild waters. I rocketed over them. Then I swung back toward the cliffs of Midgard and came roaring down from behind upon the crest where

Loki had his storm-cones.

I had the cabin-window open, and my crude bombs near at hand. As I dived steeply, I peered down at the crest. Loki stood by the vicious stormcones. The big mechanisms were clustered close together, their quartz nozzles pointed toward the distant Aesir forces. A fine violet electrical brush plays over them as they sprayed their controlled static field.

I saw Loki's startled white face, and the alarmed features of Utgar, Hel and the Jotun captains as my plane swooped down. Diving within a few yards of the storm-cones, I dropped four small bombs. There was a crimson flare in the lightning-seared blackness behind me. I looked back to see the stormcones, all but one, lying shattered and dismounted. I glimpsed Loki and Utgar. Unharmed, the Aesir arch-traitor was shouting orders as the Jotuns ran to their horses.

"Score one for my science," I muttered between my teeth, as I hurled the plane back toward the Aesir positions.

The single remaining storm-cone was still operating, and lightning was flaring and thunder rolled. But the terrific hall of bolts that had threatened to destroy the Aesir had stopped.

"Well done, Jarl Keith!" roared Thor, when I had landed my plane and run back to the hillock where Odin and

his captains stood.

"It was well done," Odin declared.
"For my generator is faltering now.
Had you not destroyed the storm-cones,
we would have been helpless."

"Loki's preparing to advance with all the Jotun forces," I said breathlessly. "See, there they come now!"

The Jotuns were deploying on the farther side of Vigrid field. At least ten thousand unmounted warriors formed up behind their wide screen of cavalry.

"There rides the arch-traitor!" cried

Heimdall wrathfully.

I saw Loki. He rode behind the cavalry, at the head of the massed Jotun footmen. His bright golden helmet gleamed in the lightning flashes, his white steed curvetting. Besides Loki's horse ran a great, gray shape—the huge wolf, Fenris, coming like a war-dog with its master into battle.

"If only Iormungandr were with him, too!" rasped Thor. "The Midgard snake must die this day, to fulfill my

oath."

THE archers of the Jotuns, advancing behind their screen of horsemen, were discharging their missiles. Arrows rattled down like rain among us. Men dropped from their mounts and horses squealed with pain.

"Take your places, but do not charge till I give the word," Odin ordered. "Are we to be riddled without strik-

ing back a blow?" cried Thor furiously.
"Wait till I give the signal," Odin
bade sternly. "Both our wings of
horsemen shall ride at the center and
split through their main body. Vidar
will follow with our footmen. Then, if
Wyrd wills it, we shall cut their split

forces to bits."

Odin rode forward, and I followed with Vali, Bragi, Forseti, and the other of the Aesir captains. Taking up our position between Thor's horsemen on the left and Heimdall's on the right, we waited. I felt the awful suspense of the moment. The arrows rattled down among us during the slow advance of the great Jotun host. The thunder and lightning of the storm still grumbled across the dark sky. In the face of them all, the horsemen and footmen of the Aesir waited silently and motionlessly behind Odin.

The Jotuns were well within bowshot, and their arrows were taking even greater toll. So close were they that back among them I could make out the white face of Loki, urging them forward. I could see big Utgar, the Jotun king, riding beside the archtraitor. An ancient feud was rushing toward its climax in these last moments. I felt the tension of men who were somehow more than men. When this battle joined, it would be the clash of cosmic forces. . . .

"Now!" cried Odin, raising his

mailed fist and flashed his sword high. The trumpets of the Aesir blared wildly in answer. With a yell of pentup tenseness, we spurred our horses and galloped forward. Our two mounted wings converged, charging right at the center of the great Jotun army. Riding forward with the others, I was scarcely conscious of individual action. Instinctively I spurred and drew my sword and leaned forward over my saddle-bow.

Before me, Odin's mighty figure galloped with great sword still raised high. Beside me, Thor was already whirling his gigantic hammer, bellowing his territying battle-cry. Beyond him were Heimdall, Forseti and Bragi. And behind us thundered the three thousand Aesir horsemen, followed by the footmen under Vidar, Vali and Tyr.

Arrows showered among us. Men and horses tumbled, crashing in our midst as we galloped in that wild charge. Thunder roared deafeningly from the blackened sky ahead to drown our yelling trumpets. Lightning flashed blindingly across the sky.

We struck the screen of the Jotun horsemen like a thunderbolt, tore through them as a sword tears through paper. Then our charge carried us smashing deep into the main body of the Jotun army. All Earth must have felt the splintering shock of that collision! My horse stumbled over Jotun bodies. I leaned from the saddle and struck furiously with my sword at black-bearded warriors who sought to reach me with ax and blade. I hewed down two enemies before their spears could touch my side.

A LL around me, swords were bang-ing on helmets, men yelling in fierce blood-lust or shrill death agony, hamstrung horses squealing horribly, shields crashing together with deafening clangor. The trumpets of the Aesir were blaring unceasingly. The hoarse horns of the Jotuns roared a savage answer.

Thor, close beside me in the battle, was forcing his stallion forward. His huge hammer kept falling like a thing endowed with its own life upon the helmets of the Jotuns. Miolnir's steel was red with blood and gray with brains as the bearded, red-faced giant whirled it. Thrice in as many moments, he beat down Jotuns who would have slain me. And on my other side, Heimdall was wielding an ax like a woodsman, and Vidar was riding forward through the corpes he had made.

Right in front of us, Odin's eagle helmet gleamed through the chaos of battle. The great sword rose and fell as the Aesir king forced deeper into the Jotun host.

"For Asgard!" rang his deep voice. And from the Aesir horsemen and footmen behind us shouted an answering chorus.

Follow the king! Strike for Asgard!"

The Jotun host began to split and give way before our concentrated assault. Though they greatly outnumbered us, we were driving a wedge between them.

"They waver!" shouted Vidar, wildly exultant. "Push hard and the battle is ours. They are breaking!"

As we forced forward, the Jotun footmen were giving ever more rapidly. If we could split them in two, cut them up and destroy them-

"Loki comes!" screamed Heimdall. I saw his golden helmet shining through the murk of lightning-seared storm. Loki was pushing fearlessly through the Jotun host toward us. His face was white and beautiful with the exhilaration of battle as he came through the fight toward us. Beside him rode Utgar, and between them ran the great, gray shape of Fenris.

"Stand firm, Jotuns!" Utgar was yelling to his wavering host. "The

lord Loki is with us!"

With a fierce war-cry, Odin spurred forward to meet Loki. Thor, Vidar, Heimdall, Bragi and I were all close behind the Aesir king. Heimdall and Bragi, forcing farther ahead, met the charge of Loki and Utgar first. I saw Loki's sword flash and Heimdall tumbled from his horse, stabbed through.

Utgar's ax had crashed down upon Bragi's helm at the same moment. From Thor came an awful vell of wrath as he saw our two comrades fall.

"Come to meet me, traitor!" he bellowed to Loki.

But Odin reached the arch-demon instead. Beneath the flare of lightning, they struck at each other with swords that flashed like streaks of light. Fearless, blazing and beautiful shone Loki's face as he fought. His silver voice pealed in exultation.

"At last, Odin, I repay you for my long imprisonment!"

UT Odin, at that moment, struck forth fiercely with all his strength in a great blow at Loki's helm. Loki swerved, but the sword grazed his helmet. The stunning force of the blow sent him heeling back in his saddle. "Death for Loki!" yelled the Aesir

behind us in wild triumph.

A snarling, terrible roar, a scream of warning from my lips, both broke at the same moment. The giant wolf Fenris, as Loki was stricken aback by that terrible blow, leaped up like a gray thunderbolt at Odin. His huge jaws closed upon Odin's throat, Holding fast, he dragged the Aesir king from the saddle.

"Odin falls!" raged the shout of joy from the Jotun host.

I had already leaped from my saddle. I struck a terrific blow at Fenris as the huge wolf tore at Odin's prostrate body. My sword slashed deep into the wolf's shoulder. He turned, his green eyes blazing hell-fires, and catapulted at me.

But with a hoarse shout, Vidar struck at the charging wolf with his ax. The blow severed Fenris' head from his shoulders in one tremendous stroke. Odin's throat was torn into red ribbons. His eyes were closed and he seemed barely living as Thor lifted

"Odin is slain!" pealed Loki's silver voice. "Now falls Asgard. On, Jot-

Loki had recovered from the stunning slash that had been Odin's last. He was urging the Jotuns forward, his eyes flaring with unhuman rage at the slaying of his wolf. The Aesir charge had halted, our warriors dismayed by the fall of Odin. And now, as the Jotuns rushed forward on us, we were pushed back by their superior numbers.

Back toward the end of the field, the cliff-edge from which Bifrost Bridge sprang, we were forced. Though the Aesir fought like madmen, they were falling in ever-increasing numbers before the yelling hosts of Jotuns. Thor had taken Odin's body and was bearing it back with us as we retreated. From all sides except the rear, the Jotuns surged upon us. The slaughter here was terrific. I seemed to be fighting in an unreal dream.

There was no standing against the heavier Jotun mass. Our shattered forces streamed over the high arch of Bifrost Bridge, through the gates of Asgard. Vidar, Tyr, Forseti and I

came last.

Now all our surviving forces were safe within the gates. Utgar and Loki were leading the Jotuns hastily up onto the bridge after us. But as the winches inside the guard-castle creaked hastily, the gates were slowly swinging shut. Loki yelled an order. As though obeying a prepared plan, a score of Jotuns flung heavy spears into the hinges of the closing gates. The spears jammed the hinges, and the gates stopped closing.

"Push shut the gates!" Vidar yelled to the men at the winches.

"We cannot, for they are jammed!" was the frantic answer.

Across the rainbow bridge, Loki was leading his men forward and crying to them triumphantly.

"Forward, Jotuns! Over the bridge! The gates of Asgard are open to us!"

CHAPTER XIX

Flank Attack

TIDAR yelled to the warriors behind us.

"Clear the hinges, some of you! The rest of us will hold back the Jotuns!" He sprang out onto Bifrost Bridge. Tyr, Forseti and I, with a score of Aesir warriors, leaped after him. The men behind us worked frantically to pull out the heavy spears that had jammed the hinges of Asgard's gates. We four stood abreast on the arched bridge, our warriors behind us, facing the Jotun masses as they rushed up behind Loki and Utgar.

The storm darkened the whole sky, and wild winds threatened to sweep us from the unrailed, narrow span on which we stood. Lightning flared continually across the sinister sky, and the

thunder was rolling louder.

Tyr had torn off his brynia and thrown away his helmet. His great breast bare, streaked with blood, he held two swords in his hands. cavernous eyes glared with a terrible light as he stepped in front of us. He velled in a howl like that of a wild beast to the advancing Jotuns.

"Berserk am I! Who comes against

The Jotuns pushing up onto the narrow bridge hesitated at sight of him, for he was truly terrible in his berserk madness.

"I await you, Utgar!" Tyr howled, his body quivering, swords are athirst!" "Come, for these

Utgar answered with a roar of rage. He and Loki, dismounted now, came up the arch of the bridge against us at the head of the Jotun mass. Tyr did not wait their coming. With a ferocious scream, our berserk companion sprang to meet them.

His two swords leaped like living things. Utgar's ax shore into his side —and Tyr laughed! Shouting with glee, he smote Utgar's head from his

shoulders with a single awful stroke. Five Jotuns fell before him as he raged in berserk fury. Abruptly Loki's blade stabbed through his heart. Tyr swayed, staggered at the edge of the bridge. Then he crumpled and fell clear from the stone, plummeting down toward the raging, stormy sea far below.

Vidar, Forseti and I had been rushing forward with our men to support Tyr. Now we met the Jotuns, who were maddened by the killing of Utgar, urged on by Loki's silver voice.

For whole minutes we held the bridge against them! How, I do not know. Before my eyes was only a blur of flashing steel and wolfish faces, into which I struck by instinct rather than by design. I felt the red-hot stabs of sword-blades in my left shoulder and right thigh. I saw Forseti reel back, dying from one of Loki's incredibly swift, deadly thrusts. I glimpsed the arch-fend's wrathful, beautiful face as he fought with Vidar.

We were pushed back over the arch of the bridge, toward the gates. A yell crashed up from the men behind

"The gates are freed!"

E staggered back through the small opening of the nearly closed gates. Instantly the gates were slammed shut in the faces of Loki and his hordes. For several moments we stood motionless, panting, wild-eyed, covered with blood. The Jotun hordes were banging vainly at the gates with sword and ax.

No more than a few hundred Aesir warriors remained as exhausted, wounded survivors of that dreadful battle. Out on Vigrid field, the dead lay in thousands. Ravens were swooping down on the pathetic corpses from the storm-black sky.

"Get to the towers and use your bows upon Loki's horde!" Vidar called hoarsely to part of our warriors.

They obeyed, and arrows began to rain down on the besiegers on the bridge. The howling of the Jotuns was loud even through the deepening thunder of the storm, as they sought to batter down the gates, yet avoid their own slaughter.

Vidar hastened with us through the

guard-castle to the stone plaza beyond. There Odin lay upon the stones. Thor was kneeling beside his dying father. Odin's lips stirred, his wavering stare held a feeble, dying light as he looked up at his giant son.

"The Norns sever my thread," he whispered. "Doom falls upon me, as Wyrd ordains—upon Asgard, too, I fear. If Loki prevails, you must do that which I ordered you."

"I will, Father," rumbled Thor, his big hand clenching tight the helve of his mighty hammer. "But stay with us!"

Odin's life was already gone, though, spent by his last effort to speak.

"Bear him to Valhalla!" ordered

Thor's great voice as he arose.

"Loki and some of the Jotuns move away," called a warrior from the guard-

castle tower.

We hurried back and looked through the loopholes in the gates. Loki and half the Jotun forces were striding back across the bridge and Vigrid field, marching southward. The rest of the Jotuns still battered at the gates, heedless of the arrows that fell upon them from above.

"Loki plans some trick," Thor mutered.

"Where are our ships?" Vidar cried. "Look!"

He pointed down at the sea east of Asgard. There the waves were running high and foam-white beneath the howling winds of the storm. I saw the Jotun fleet below, hacked and reduced to less than forty almost useless ships. But they were beating southward along the coast, parallel to Loki's marching force. Scarred and torn by battle though the Jotun ships were, of the Aesir vessels I saw nothing but floating wreckeds?

"Skoal to Aegir and Niord!" shouted Thor. "Skoal to the sea-kings who have gone to Viking death beneath the waves!"

A clanging like the din of doom beat from the gates before us as the Jotun horde upon the bridge sought to batter them down. We worked at Thor's orders, hastily piling blocks of stone to hold the sagging gates. Then into our midst a wild-faced Aesir warrior came running. He shouted over the clangor and the terrifying roll of loud thunder. "Loki's forces come upon us in their ships!" he yelled. "They seek to land

in our harbor!"

Thor uttered a fierce cry as he stared down at the stormy sea. The Jotun fleet was moving along the coast, the ships jammed with men, heading for the unprotected fiord in the eastern cliffs of Asgard.

They try to force entrance to Asgard from the harbor-and we have but few guards there!" Thor roared. "Vidar, hold these gates! Half of you come with me to hold the harbor!'

The bearded giant ran with mighty strides toward the eastern edge of Asgard island. Half of us followed him. The storm was now buffeting Asgard with full force. Lightning burned in sheets and stabs across the night-black sky. Torchlight was flaring from the dark, mountainous mass of Valhalla, whence came through the tempest the dim wailing of women's voices as Odin's body was borne home.

Out of the storm-seared dusk, a slim, mail-clad figure darted to my side as I hastened with Thor and our scant force of warriors toward the eastern cliff. It was Freya, wearing her mail and helmet, holding a shield and light bow in

her hand.

"Jarl Keith!" she cried. "I feared you slain in yon terrible battle! I leave

you no more!"

"You can't stay with me!" I protested. "We go to hold the harbor against Loki's new assault."

Then I fight with you!" she said fiercely. "If doom comes now upon Asgard, I meet it at your side."

I could not turn her from her relentless purpose. She ran lightly beside me as we hastened after Thor down the first steps of the narrow cliffside stair. Lightning washed the cliffs, and the deafening crack of thunder drowned the shrieking winds and boom of the sea. By the flashing flares, we saw the Jotun ships already sweeping quickly into the narrow fiord below us. Behind them in the raging sea swam something long, black and sinuous, a great, incredible shape.

"Iormungandr comes with his master Loki!" boomed Thor. "It is well!" Before we were down the stair, the Jotuns were landing below. Overwhelming the small force of Aesir guards there, they rushed up to meet

I swung Freya behind me. "Keep at my back," I ordered.

"I am not afraid!" argued her clear voice in my ear.

Her bow twanged, and an arrow sped down into the throat of the foremost of the swarming Jotuns. I saw Loki leaping ashore from one of the ships. Then the nearest Jotuns reached us.

CHAPTER XX

Ragnarok Comes

THOR'S hammer smashed down, and the first two Jotuns fell back with crushed skulls. They pitched off the stair to the depths below. Arrows from enemy archers farther down the stair whizzed up through the lightningseared dusk and rattled off our mail, or struck down men among us. Freya's bow kept twanging. Each time she loosed an arrow, her clear cry sang loud in my ears.

I tried to keep her near me as I fought beside Thor and tall Vali, desperately trying to hold back the Jotuns. But the stair was wide enough only for three of us to fight abreast. Thor, crimson with blood from many wounds, swung his hammer like a demon of destruction. Yet we were forced up the stairs. Vali dropped with an arrow in his eve. and an Aesir from behind rushed to take his place.

Upward we were pushed, to the top of the stair, the very edge of the cliff. There we hacked with sword and ax. The terrible weapon of the Hammerer whirled and screamed with such fury that the Jotuns could not force the narrow way.

"Make way for me!" pealed Loki's silver voice from below, through the clash of battle and the storm's roar. "I will force the way!"

"I am waiting for you, Loki!" bel-

lowed Thor to the arch-traitor.

Lightning flared again in a continuous blinding flame. It showed Loki's golden helmet flashing up amid the Jo-

tuns crowded on the stair. And it showed, too, a slimy, black, scaly monster whose coils rippled up the steps as it advanced before its master.

"Iormungandr comes!" cried Freya.

"The Midgard serpent!"

The Jotuns hugged the cliff side of the stair. Even they were appalled by their dread ally as the incredible snake writhed up toward us. Thor raised his hammer high. Like a shooting black thunderbolt, Iormungandr propelled himself at the bearded giant.

In the lightning streak, I saw the snake's giant spade-shaped head darting with the speed of light. Its opaline eyes were coldly blazing. Its opened jaws emitted a flood of fine, green poison-spray that covered Thor's crimsoned figure.

"My oath to Frey!" roared Thor, and his hammer flashed down. The snake, with more than human

speed, swerved to avoid that terrific blow. But not so swift as Thor's stroke was its swerve. The steel head of Miolnir smashed down upon the spade-shaped head and ground it into the rock of the stair. The hammer itself shivered to fragments from that tremendous stroke.

Iormungandr's monstrous body writhed in its death-throes, flinging Jotuns from the stair to death. Then the serpent's great body fell over the edge, dropping to the sea far below.

"Slain-my wolf and serpent slain!" raged Loki's voice. "Vengeance, Jotuns! Vengeance on Thor!

THE giant was staggering almost helplessly. The helve of his broken hammer suddenly fell from his hand. His red face grew pallid through the blood and green poison that coated it. I sprang with Freya to support him. The few score Aesir warriors left were trying to hold back the Jotuns. Loki's sword was stabbing in deadly strokes among them,

"I am sped," gasped Thor, "The poison of Iormungandr enters my wounds. Help me to Valhalla, for Asgard is lost. There still remains that

which Odin bade me do."

Freva and I stumbled with the reeling giant away from that hopeless battle. Our last Aesir warriors could not hope to hold back Loki and his ravening horde. The unending drum-roll of thunder was crashing over Asgard. By the sheeted lightning, we saw Aesir women running calmly to stand beside their men in death. We staggered with Thor into the torchlit entrance of Valhalla castle.

"To the chamber of-the pit-roadto deep Muspelheim-take me there,"

Thor gasped.

As we entered Valhalla castle, I heard a wild, wolflike shout of triumph behind us. I looked back. The last Aesir resistance had been overcome, and Loki and the Jotuns were pouring onto the lofty plateau of Asgard. Some of the Jotuns already were running to open Asgard gates to those who battered them from Bifrost Bridge. Women who had rushed out to seek their dead mates were being cut down everywhere.

"Asgard has fallen!" moaned Freya, her blue eyes stricken in the lightning-

flare. "Loki triumphs!"

"No!" cried Thor in a startlingly great voice. "Never shall Loki reign triumphant in these halls. Lead me on!"

Freya snatched a torch from a socket as we entered the passages of Valhalla. We stumbled past the great hall where Frigga still sat motionless beside Odin's body. On we went, down into the dark passages to the chamber of the pit that led to fiery Muspelheim, Swaying blindly, Thor pressed the

runes on the door with a swiftly failing hand. The door swung open and we entered. Immediately the bearded giant crumpled standing against a wall. Fighting to retain consciousness, he pointed to the square silver box that held the remote control of the sea-gate in the roof of the fiery underworld.

"Give me that control box, Jarl Keith," he whispered in a weakening voice, "that I may open the gate far below and let the waters of the sea rush down into Muspelheim upon the atomic fires. It was my father Odin's order to me. Yes, the atomic fires will be smothered and their radiations will be ended. This will no longer be a place of eternal youth and warmth."

"But when the sea water strikes Muspelheim, there will be an explosion that will wreck this land!" I protested.

"And that, too, would be well!" Thor shouted, swaying. "Let the land be wrecked before Loki and the Jotuns reap fruit of their victory and become a dread menace to all the rest of Earth. It was Odin's warning—Loki must not be allowed to menace all the world!"

E fell heavily to the floor. But he raised his great head and his voice came chokingly;

"Give me the box!"

I heard the quickly approaching roar of Jotun voices from Valhalla's halls above. I heard the shriek of the last Aesir women being cut down by the followers of Loki. In my mind unfolded a shocking vision of Loki, using his overwhelming powers of evil science to dominate all the outside world. I sprang toward the silver control box and was turning to hand it to dying Thor, when Freya screamed.

A man burst into the chamber. Loki's angelic face was a hell-mask of rage. The sword glittered in his hand and his blue eyes were blazing.

"I knew the Aesir would seek thus with my own ancient handiwork to snatch triumph from me by destruction," he said. "But you are too late."

He sprang at me with tiger swiftness, his sword raised. I ripped out my own weapon, but Loki's blade was already stabbing through my shoulder like a white-hot iron. I recled, senses failing from that agony, dropping the silver control box. Freya darted forward with a wrathful cry, and I saw Loki hurl her back against the wall.

"You have lost, Aesir!" taunted Loki maliciously. "Asgard is mine, and the last Aesir falls to the swords of my Jo-

tune "

He did not see the great shape rising behind him. Thor, roused by sound of Loki's hated voice, had clutched the rock wall with his nerveless, bloodily tattered fingers and dragged himself erect. Involuntarily I recoiled from the staggering, ominous, black-fleshed figure. But Loki was caught unprepared. The giant hands stole close—and clutched Loki's white neck!

"Turn the knob upon the controlbox, Jarl Keith!" Thor roared.

Loki stabbed his dagger blindly and

furiously back into Thor's breast, battling venomously to free himself. I lunged forward and snatched up the silver box. I seized the knob upon it and turned it as far as it would go.

From the pit-mouth at the center of the chamber came a dull, distant roar of rushing waters. Then a terrific shock rocked Asgard to its foundations. Blinding steam swirled up from the pit with a ravening sound.

"Fool!" shrieked Loki as he tore free

from dying Thor.

He hurled himself at me, seeking to snatch the control box from my grasp. I thrust him back with the last of my strength. Through the scalding steam that filled the chamber, Loki staggered backward—and reeled straight into the nit!

A fading scream came up from the roaring cloud of steam as he plunged

down into the abyss. . . .

All Valhalla castle was rocking wildly above us. One fearful Earth-shock followed another. Wild yells of panic chorused from above, coming thinly through the tumult of grinding mountains. Freya was flung against the stone floor, and I stooped frantically over her.

"It is well!" choked Thor. "Asgard and Midgard shall die with the Aesir!" As he sagged to the floor, he raised his dying face toward me. "Save Freya if you can, Jarl Keith. If you can reach your flying ship, you may escape the death that stoops now over all this land."

His eyes blazed up with the last light of fast departing life. For a moment his voice rolled out as strongly as of old. "Skoal to the Aesir! Skoal to the

great race that is gone forever!"

Then his bearded face sagged to the

floor in death.

HELPED Freya to her feet and dragged her out of that scalding, steam-filled chamber. The Earth-shocks were becoming more violent with each moment. The crash of falling masonry was ominously loud.

"We can't stay here any longer!" I cried to her. "But if we can get to my plane, we can escape."

"Let me die here with my people," Freya moaned, her white face agonized. Abruptly her eyes cleared and she clasped my arm. "No, Jarl Keith. Even now I wish to live for you. But

can we escape?"

I stumbled with her up through the shaking, grinding halls of Valhalla castle. The Jotuns had fled or been buried. The scene outside the castle was appalling. Storm still blackened the sky. Lightning flared and thunder roared, but all noises were drowned by the terrible grinding crash of the Earthshocks.

The castles around the edge of Asgard were being shaken down into ruined masses of masonry. The Jotuns were fleeing wildly down toward their

ships in the fiord.

I hastened with Freya toward Bifrost Bridge. A terrible roar beneath us heralded the new shock that flung us off our feet. From cracks splitting in the solid rock of Asgard, wild clouds of steam rushed up. There was a prolonged roar of falling stone. Freya cried out. I looked back just in time to see great Valhalla collapsing into flaming, tumbling ruin.

By this time we had reached Bifrost Bridge and were stumbling precariously across that corpse-littered, dizzy, trembling span. The rainbow bridge abruptly rocked beneath us, threatening to throw us into the crazily boiling sea far below. Some Jotuns were escaping ahead of us, paying no attention

to us in their mad panic.

My plane suddenly loomed out of the The Jotuns, in their stormy dusk. fierce eagerness to get into Asgard, had not even molested it. I pulled Freya into the cabin. The rocket motor roared into life, and the plane rushed along the quaking field and lurched into the air. Upward we climbed, the ship bucking and rocking in the terrific cur-

As we climbed higher and headed northward, I saw the full extent of the disaster that had smitten the hidden land. Midgard and Asgard, rocking wildly and shaking the rainbow bridge between them into fragments, were sinking into the sea, shrouded with steam.

The titanic explosion caused by the inrush of sea upon the raging atomic fires of Muspelheim was forcing the whole land to collapse upon that buried underworld. Before our eyes, as I fought to keep the plane aloft, the land solemnly sank.

There was nothing but sea and veils of steam. The blind-spot refraction around the whole land instantly vanished. The rhyme of the rune key had been fulfilled.

Ragnarok had come-the twilight and doom of the Aesir, destroying them and their amazing, wonderful civilization-and also their destroyer. . . .

EPILOGUE

F my great adventure, little remains to tell. Our flight back across the frozen ocean to the expedition's schooner was without mishap. I shall never forget the amazement of Doctor Carrul and the rest of the expedition's members, when I landed my rocket plane beside the Peter Saul. Feverishly they asked excited questions when they saw Freya and the bloodstained, battered helmets and mail we wore.

I told them the truth, though I suppose I should have known they could not believe my story. But for their disbelief, I cared little. Nor did I care about what happened after our return to New York. The expedition included in its report a statement that Keith Masters, physicist and pilot, had returned in a delirious condition. They said I had been caught in an Arctic storm, and had brought with me a girl who was obviously a survivor from some storm-wrecked Norwegian ship.

I know now that the smug skepticism of modern men is not to be shaken lightly. Far in the north, beneath the frozen ocean, lie the shattered ruins of the hidden land I trod. Though men may some day penetrate to that submerged, lost land and lay bare the broken stones that once were Asgard's proud castles, they will not wholly be-

lieve.

Nor can I entirely blame them. For there are times when even to me all that I experienced takes on the semblance of a dream. It certainly seems like a dream that I rode over Bifrost Bridge with Odin and the warriors of Asgard. Did I really sit in Valhalla's high hall and feast with the nobles and captains of the Aesir? How can I be sure I fought side by side with Thor against Loki and his hordes, on that last great day?

But to reassure myself that it was no dream, I have only to turn and smile gratefully at Freya, my wife. She is dressed now in modern garb, but with the same bright golden hair, sea-blue eyes and slender grace as when I met her first on the cliffs of Midgard. For always Freya is beside me, and not one day have we ever been separated, nor will we ever be.

We do not speak often of lost Asgard and its people, though always they are in my mind as I know they are in hers. But on one night each year, the night of that doomsday eve when we feasted in Valhalla before the coming of the enemy, I pour wine into two glasses and we drink a toast. And our toast is in the words that Thor spoke from dying lips.

"Skoal to the Aesir, to the great race that is gone forever!" I say as I raise my glass.

And from across the table comes Freya's sweet, sorrow-filled voice, whispering her reply. "Skoal!"

And we drink in memory of the greatest people Earth has ever known.



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this isn't my blood! Ah, there's the wash-bowl. Do you know, Attorney Higgsby, blood becomes quite—shall we say, addesive as its moisture evaporates. . . .

My pursuers? The police, of course! You see, last night I made my escape from the State Hospital for the Insane, and the blood-hounds of the law, as they have been called with little justification, are on my trail. That is why

I need an attorney. . . . Of course, I am sane! Don't be absurd! I sir, am none other than Cyrus
Bidwell Dinwiddie, Ph.D., until recently Professor in the Mathematics
Department of Bluegill Academy. I
must admit, however, that there have
been times during the past six months
when I doubted my sanity—but now all
that is past, and I know! I am perfectly

I, sir, am a victim of circumstances—and of one of my colleagues, a Doctor Prebble, a rather cheap fellow, very similar in appearance to you, my dear Higgsby. The same type of squat rotundity, though perhaps in a lesser degree, the same pendulous jowls, baldness of the same—shall we say, spotty nature.

In all justice to Prebble, however, his forehead reveals at least rudimentary intelligence—I beg pardon?

H, I thought you said something that sounded like "nuts"—though with this infernal headache it is quite remarkable if I hear anything correctly.

As I was about to say when you interupted, the student body somewhat facetiously referred to Prebble and me as "the long and the short of it," doubtless because I am rather tall, and my frame is inclined toward leanness.

But to continue, friend Higgsby, I am a martyr to the cause of science! I took the rap, as Nick Rozelli would say—a term in gangster argot with which you may or may not be familiar, but which means briefly that I bore the burden of another's guilt. NotI, but Preble, deserved confinement in that institution. That is why I have come to you, an attorney. I seek justice in the courts of law.

The blood? Oh, that is of minor importance, especially now that I have washed it away. You'll hear of it in good time, but there are other, more interesting incidents which must first be told.

The affair began with a headache. There was nothing unusual about that —merely the ordinary dull throbbing at the temples which even you have doubtless experienced upon occasion. It was not until it had persisted for four consecutive days and nights that I became somewhat perturbed, and decided to consult Professor Prebble—Marcus Aurelius Prebble, instructor in the Science Department at Bluegill.

Prebble welcomed me in his laboratory adjoining my classroom with—I know not how else to express it—a

gloating smile.

"Well, Widdle," he said after I had explained the nature of my dilemma, "you've consulted the right man. Strangely enough. I've been experimenting with a new treatment for headaches, and I believe I've discovered a permanent cure. It's simply a matter of a restricted diet for a short period, and the application of the emanations of a new radioactive compound which I have discovered."

I had had enough experience with Prebble's continual experimentation to feel a vague sense of misgiving, but I refused to take warning. I gave a momentary thought to the timeliness of his discovery, wondering at it, but then I dismissed it from my mind. After all, I merely had a headach.

But after two weeks of Prebble's treatment that exectable thudding in my cranium continued with no indication of abating. Day and night that maddening throb, throb, throb hammered against my skull—and then the dreams began!

You've doubtless had dreams, my dear Higgsby. They are, shall we say, the adventures of the subconscious mind. I, too, have had dreams prior to this, but none approaching these in stark reality, in their kaleidoscopic clarity of detail. It was as though I lived my dream experiences—as though conscious and subconscious min d merged into one indissoluble whole. I remember that first dream in all its ramifications.

I was in the heart of a tangled wilder-

ness of twisted metal, shattered stone, and splintered wood. It towered all around me, over me, with the monlight filtering through in threads of silver. Endlessly, I struggled through the ruins, wishing, I recall, that the bombers had been less thorough. Finally I crawled, like a mole, under a shattered pillar and peered through a jagged rift in the wall of the ruin.

GRAY-CLAD men rushed to and touch. A hundred yards away a row of hooded lights revealed a flying field on which lay countless war helicopters of most unusual design, awaiting, I knew, the call to service. To the north, jutting dimly in the gloom, towered what appeared to be a tremendous reflector, all of five hundred feet in height—a sheet of polished copper curved in a great half-circle.

Suddenly a vast sheet of electrical flame leaped from the reflector and, with an ear-splitting crackle, hurtled into the sky toward the south—the

battle zone.

I looked southward, visualizing a scene I knew too well. The horizon was a welter of chaotic light, beams of radiance crossing like darting swords high above flaming cities. The shattering roar of bursting gas bombs; great clouds of sluggish vapor falling, carrying death into every minute creview.

A second bolt of lightning leaped from the reflector; and as I faced north again, I saw two men in gray charging toward me—and, mercifully, I awakened.

I lay interminably, trying to free my mind of a persistent thought that what I had seen existed somewhere, sometime. As though I had had a glimpse of a future war, in fact, had engaged in that war!

It was most disconcerting, my dear Higgsby, particularly so, when the dreams continued night after night. There was no apparent pattern or system to my visions. My perception seemed to journey indiscriminately through all periods of both past and future, so that, one night I might be stalking a saber-toothed tiger with a group of shagey-haired cave dwellers,

and the next, might be toiling in a Jovian prison pit. And each scene was so incredibly vivid that at times, so great was my confusion, I had difficulty in convincing myself that my waking hours were not dreams, and the dreams, reality. It became so troublesome that finally I slept as little as possible. And through all that period the headach persisted.

At last there came the first waking vision—and that, sir, was the pay-off,

as Rozelli would say . . .

Rozelli? Oh, he was a mobster I met in the asylum—a most interesting chap, and a man of sterling worth. I shall tell you of him in due course.

But to return to my tale—and, really, Higgsby, I wish you wouldn't interrupt. Frankly, I don't like it! If you insist on being so rude, I shall be compelled to seek legal advice elsewhere. . . .

Very well, then. I was speaking of my first waking vision. It occurred, of all places, in the classroom! I was explaining a problem in geometry-a simple affair, purely elementary, and I suppose my mind was wanderingwhen suddenly I seemed to be transported to ancient Rome. I stood before a vast multitude, delivering an oration. My pupils afterward informed me that they heard a sonorous flow of classic Latin rolling from my lips. I must have spoken for all of ten minutes before I regained control of my mind. Then, in some confusion, I referred to a passing illness and dismissed the class.

MMEDIATELY I sought out Prebble, a vague suspicion in my mind.

Be ble, a vague suspicion in my mind. I found him in his laboratory working with a few special students. When he saw me, he must have anticipated something unusual, for he hastily excused them. His act crystalized my suspicions.

"Prebble," I said without preamble and, I fear, somewhat harshly, "what

have you done to me?"

There was nothing of the surprise which should normally have appeared on his fat face as he asked in supercilious tones, "Now, Widdie, what seems to be the trouble?"

"Trouble!" I rasped, stung, as it were, to the quick. "Trouble! You

know full well what is the trouble! Ever since you began your—your damned treatment for my headache, I've been seeing things." Regrettably I cursed, but I was beside myself. "Now, tell me what you've done. And cease calling me Widdie!" The diminutive of my surname, always distasteful, now filled me with ungovernable wrath.

"Of course, Biddie, I'll tell you."
Prebble said, employing a shortened
version of "Bidwell," just as annoying
as "Widdie." There was leering triumph in his voice. "I've given you a
sixth sense—a hyper-sense!"

"A-what!" I was, to say the least, taken aback.

taken abacı

"A hyper-sense," he repeated. "A faculty which enables you to perceive the fourth dimension of space, the hyper-world!"

nyper-world

Prebble assumed his best classroom manner, and while I listened, halfdazed, he explained:

"It is a well known physiological fact, Biddie, that in the human brain there are large numbers of nerve cells that remain undeveloped because they are never excited to activity. At birth the neurones-nerve-cells to you, Biddieare structurally perfect, yet they will remain inert and undeveloped until awakened by their special stimulant. For example, to one born blind, the cells of the center of sight will remain in a rudimentary state until excited by light. If through an operation light reaches the sight neurones, they begin to enlarge, their blood supply is increased, and all related nerve centers begin to develop.

"It has been asserted, Biddie, that if the apparatus by which the nerve centers of the five senses receive impressions from the external world were destroyed at birth, the thousands of millions of nerve-cells would remain inert and undeveloped during the individual's lifetime. The neurones would be there, perfect in every way, but to that individual there would be—nothing. To him the world would not exist.

"Now, Biddie, I reasoned thus: If to the born-blind there is no world of light, and to the born-deaf there is no world of sound, may it not be a fact that around us exist other worlds than those revealed by the five senses worlds we do not recognize because the special nerve-centers for that purpose have not been stimulated to activity? May not the mental phenomena of dreams, telepathy, hypnotism, and the like, be traced to the stimulation of nerve-centers aroused only under special conditions?" He paused.

I said somewhat haughtily: "One would think, Prebble, that I were one of the more stupid undergraduates! All this is quite elementary and, I dare say, rather obvious. But you referred to a hyper-sense, a sense of the fourth dimension."

REBBLE shrugged, and his smile was most exasperating. "That should be equally obvious to you, Biddie, a mathematician. Do vou not in some of your calculations use a fourth variable, time? Need I draw for you the analogy of the point moving into the line, one dimension; the line moving into the surface, two dimensions; and the surface moving outside itself to form the solid, three dimensions; and the three-dimensional body moving in still another direction-a direction not contained within itself-to form the fourth dimension? And what would that direction be but time? Time, the distance separating events, distance lying in a direction not contained in three-dimensional space-therefore the fourth dimension!

"To quote Minkowski, with whom you should be familiar: Space in itself and time in itself dissolve into a shadow, and only a kind of union of the two can maintain an independent exis-

tence.' Really, Biddie-

Nettled, I cut him short. "Prebble," I snapped, "I don't like your manner! And don't quote Minkowski to me! Palagyi preceded Minkowski by a goodly number of years and said everything for which he later became famous." Which remark, I am confident, revealed to Prebble that I knew more about the subject than he did.

Despite my brave front, Higgsby, I was annoyed. Indeed, to be more precise, I was disconcerted. And a belief and understanding of what Prebble had done were growing upon me. Once in a lighter moment I had read a

book called "An Experiment With Time," written by an Englishman, J. W. Dunne, in which he had recorded numerous prophetic dreams. likened the entire course of events to a cinema film being shown. The actual picture on the screen was our present, but that which was yet to come was already there on the film. His dreams, he declared, peeped into the film ahead.

And Prebble had developed this ability in me-only to a far greater degree! "Prebble," I asked, "how did you do it?" And, Higgsby, I must confess, my

voice trembled.

"You recall that radio-active compound which I mentioned some time ago?" Prebble's tones were almost feline in their softness. "That did the work. Purely by accident, while studying its effects on one of the boys-unknown to him, of course-I discovered that the emanations of this compound stimulated the brain to unwonted activity, giving it what some would term the faculty of second-sight.

"But my subject was rather a stupid sort, so I switched to you. By dint of much experimentation I discovered a method whereby I could focus the-ah -impulses upon you at a considerable distance; and this, coupled with those periodic treatments, enabled me to work wonders. Ever since your headache started, every moment you spent before your classes, Biddie-Widdie-"

It was at that point, Higgsby, that I struck him. My ire had been mounting with every word he said, and that final crowning insult, that unspeakable double diminutive of my name-well, it was more than I could bear! As he rolled across the room to crash into a table and bring a rack of beakers, test tubes, and the like showering down upon him, I heard - don't smile, Higgsby! I may be rather thin, but I assure you, a blow from my fist is not a thing to be scorned!

S I was saying, when I hit him, I heard a step behind me. I turned-and there stood the dean! For the moment, as you may well imagine, I was speechless. Dean Hinkle is a gentlemen of the old school, a confirmed and ardent foe of physical violence. As I saw the horror and unbelief cross his face, it-it sort of kicked me in the teeth, as my friend Rozelli would say.

"What is the meaning of this disgusting scene, Professor Dinwiddie?" he demanded sternly. "Can it be that there is truth in the reports I have been receiving?"

Hurriedly and in some confusion I explained. As I related in full detail my harrowing experience, my truly scandalous mistreatment at the hands of my colleague, I saw with mounting perturbation that my narrative was not having its desired effect. Indeed, Higgsby, Dean Hinkle gave every indication of doubting my veracity!

As I concluded, Prebble, who by this time had arisen, shedding bits of broken glass, commented in a deceitfully

solemn voice:

"Dean Hinkle, it is truly deplorable that a man of Professor Dinwiddie's accomplishments should be losing his mind! You will note the delusion of persecution-unmistakable evidence of paranoia. Totally without warning, sir, he burst in just as I dismissed my class, hurled his wild accusation, and attacked me!"

Groping, as it were, in a fog of incredulity, I watched the Dean's expression change to one of pity, saw him slowly shake his head-and, Higgsby, for the moment I believe I actually was unbalanced. The injustice of it, the vile perfidy of Professor Prebble-it all destroyed my mental equilibrium. My teeth bared in a-pardon the melodramatic term, Higgsby, but no other will suffice-I bared my teeth, I say, in a wolfish snarl, and sprang at him.

I was astride his body, my fingers sinking deep into his throat, when students, summoned by Dean Hinkle's shrieks, came upon the scene and

wrenched us apart.

I will not recount the distressing details of that which followed. The arrival of the police, the boring and quite ridiculous examinations by asinine psychiatrists, and my final incarceration in that horrible mental institution-all that has little bearing on the case.

But, oh-the injustice of it! They shaved my beard-my beard that no barber had touched during all my thirty years at Bluegill. They cropped my hair close so, as they informed me, the other inmates, i. moved to violence. might grasp it less readily. And I became a-a creature. I, Cyrus Bidwell Dinwiddie, Ph.D., became a mere num-

ber in an insane asylum!

The first few weeks were not as intolerable as one might imagine. Despite the indignities to which I was subjected, and despite the nostalgia which beset me with every thought of dear old Bluegill, I found much of interest in my new environment. Ever the scientist, I rather welcomed the opportunity to study the various types of mental aberration with which I was associated.

THE ward in which they confined me consisted of a wide, high-ceilinged corridor, half a city block in length, and lined on both sides with the small identical rooms of theguests. At the center of the corridor lay a great room, studded with chairs, benches and a few scattered tables. It was here that most of my waking hours were spent. And it was here that I met Nick Rozelli.

After the first few weeks my study of the inmates began to pall, for, after all, their eccentricities were interesting only to a certain point, and if it had not been for two things, Higgsby, I fear my own reason might have foundered, as it were, in the sea of common insanity. And those two things-the development of my hyper-sense, and Nick Rozelli-were inextricably bound together.

As for the former-since I had this ability to see past and future, and since there seemed to be no chance of my escaping it, I began experimenting with it. And I found it a not-uninteresting diversion. With practice, I discovered, I could roam at will along the stream of time, or, to follow Dunne's analogy, I could study as I chose the film of events. It became quite fascinating, this study of living history, or of the life which is yet to come, and I would have enjoyed it had it not been for my infernal headache. But that persisted, hammering at my brain with, shall I say, mathematical regularity.

Yet I learned a lot during those interminable hours. Higgsby, if I were to tell you all that awaits the human race -but I shall not. It is enough that I should be burdened with the weight of knowledge, the feeling of utter futility. No, Higgsby, on that subject I must

remain silent. .

Oh, yes, Rozelli. Our association began in this manner. I had been seated in the great hall, staring with unseeing eyes into vacancy while my hypersense transported me to some future realm-the third Ganymedian invasion, I believe, was taking place-when a voice penetrated my subconscious mind.

"Hello, Pop," it said.

Blotting out future sight-a feat I had finally mastered-I saw a tall, powerfully built individual with smooth black hair, carefully combed, and with obviously Latin features, grinning at me. I recognized him as a newcomer in the ward. There was a friendly light in his eyes, and surprisingly, I took no offense at his interruption.

"Seein' things again?" he inquired, and there was interest in his voice.

For some strange reason I was drawn to this young man, so, permitting a faint smile to curve my lips. I answered:

"Yes-I was seeing things."

"My name's Rozelli, Pop," he said, offering his hand, "Nick Rozelli, The dicks framed me-tried to plant me on the hot seat for bumpin' off a frail, but me mouthpiece pulled a fast one, and here I am! In a couple months they'll spring me-and I'll have me triggermen snag a couple flatties for gettin' smart. But right now I'm here-and I figured I might as well meet some of the boys."

The greater part of this quaint speech was, as you no doubt realize, somewhat bewildering. The term "pop," I knew, was a friendly diminutive of the word "father"; and a "frail," as I somewhere had learned, was, surprisingly, a woman. But were it not for the ability of my hyper-sense to recall the scene in full detail, I know I could not repeat his remarks verbatim. During my later associations with Rozelli my vocabulary increased tremendously, but at the moment I could only take his smile as an indication of his good intentions, and I grasped his proffered hand.

FTER I had introduced myselfand I noted my new friend was duly impressed when he heard my name-I decided in a sudden burst of confidence to tell him my story. At the conclusion of the painful tale, he put his hand on my shoulder and said sol-

emnly:

"Pop, some of those guys over there along the wall are crazy! They told me you were nuts, see? I came over here expectin' to get a laugh. I read a lot, Pop-high-brow stuff, you know, stories where birds like you visit Mars and such places-and I can see now that this guy Prebble played you for a sucker!" At this juncture, Higgsby, Rozelli's manner became quite savage. "When I get outa here, Pop, I'll give him a damn' big dose of lead poisonand the guys in the know, Pop, will tell you that Nick Rozelli don't shoot off his mouth!"

After that Nick and I were much in each other's company. My new friend found great delight in having me recount my visions of future events, and I discovered that I, by sharing my knowledge with another, gained some relief from the despondency which came with the consciousness of life's

utter hopelessness.

So affairs remained until just four days ago when Nick approached me with a newspaper in his hand. He was one of the few inmates who was permitted to receive uncensored copies of the news journals. "Pull," he had said, was responsible just as "pull" was responsible for having him transferred from the "criminal" ward to quarters reserved for those with less violent forms of dementia. I could see that he was greatly disturbed.

"Look at this, Pop!" he exclaimed.

"Somethin' big is breakin'." I followed his pointing finger, and

saw a short, yet most startling article in an obscure corner of the journal. I read it with a feeling akin to panic, I need but look back now, Higgsby,

with my hyper-sense, and I can again see that scene and that article. I shall read it to you. You will note the facetious tone of the reporter.

WHAT A HEADACHE!

Clearwater, Pa., May 17. Aspirin is in great demand today in this little college

town, the site of venerable Bluegill Academy. According to latest reports, every-body in Clearwater at about 11:00 A.M. today became suddenly afflicted with a terrific headache. Men and women, young and old, rich and poor alike—all have headaches.

A reporter on the staff of the Clearwater

Clarion interviewed the town's leading and only physician, Dr. Benjamin Trupp, who is

declared to have said:

"Son, this is the worst headache I've run up against in forty years as a medical prac-titioner. I've had headaches myself in that time, believe me, but nothing like this. We are doing our best, but if we don't soon get relief, we'll have to appeal to the Health Department at Harrisburg.'

The same reporter, between doses of aspirin and baking soda, braved the perils of Bluegill Hall, and gained a short interview with Dean Hinkle, one of the country's leading educators. The Dean is reported to have made the following statement:

"I have nothing to say for publication."
We await with interest further reports

from Clearwater.

I need not tell you, my dear Higgsby, that I saw little of the so-called humor with which some stupid scribbler had tried to cloak his effort. I had room in my mind for but one thought. Prebble had done this! Prebble and his accursed experiments. In some way he had learned how to send out the emanations of his new compound to cover a large territory.

"What's the dope, Pop?" Nick demanded anxiously.

I could only shake my head. A pang of fear had stilled by tongue.

Two days passed in what I might call a state of tense expectancy. I could only await Prebble's next move while I figuratively gnawed my nails. Then on the morning of the third day I awakened to find the world toppling about my head. I had my usual headache, of course, so I had no inkling of disaster until at breakfast I learned that everyone in the institution was similarly afflicted - inmates, guards, doctors evervone!

Even you, Higgsby, I suppose, had a headache. .

What's that? . . . you still have one? Well, it will leave you very shortly. . . .

You doubtless noted the unprecedented flood of publicity which swept the country. I quote an article in the New York Times; and I trust you will

mark the complete lack of jocularity.

STRANGE MALADY SWEEPS NORTH AMERICA

Epidemic of Headaches Puzzles Nation New York City, May 20. America awoke with a headache this morning, a headache which, so far as we can determine, affects everyone on the North American continent. Doctors everywhere are being besieged by patients seeking relief from headaches which have refused to yield to the usual home remedies. And the doctors, themselves victims of the strange malady, are baffled.

So far as physicians have been able to learn, there is no fever, and no indication of any other ailment—only a strangely per-sistent thudding and throbbing at the temples which, even under the strongest opiates.

fails to yield entirely.

The President, speaking from the White House, and smiling his usual broad smile, is

quoted as saying:

"I've had plenty of headaches since taking office, but this one is the most severe. I trust that the people of America will bear with the inconvenience of this strange affliction for a short while, for with the best medical minds of the nation working on the problem, a solution will be found."

There is more to the article, Higgsby, but it is merely repetitious emphasis on the fact that the doctors were butting their heads against the proverbial stone wall. Strangely enough, no one seemed to have noticed the most important feature of the entire mystery-the headaches in Clearwater: at least, there was no mention of it in the news journals.

To say that I was disturbed by this latest development, would be an obvious understatement of the facts. I was, Higgsby, nonplussed. I knew quite certainly that that demented fool, Prebble, had found a means of broadcasting his radio-active emanations over a vast area, or had found some other method of stimulating the hyper-sense, and was trying to develop that sense in the minds of the nation - and doubtless after that, in the minds of the world! It would mean universal madness, for none but exceptionally well balanced intellects such as my own could bear hyper-sight without the complete loss

One salient fact thrust itself above all others. Prebble had to be stopped —and I was the only one who knew it! I looked at Nick Rozelli with, I daresay, something very like desperation on my face.

Nick," I said, "it is imperative that I scram out of here! Pronto! Prebble must be snagged-and that, at

Somewhat furtively Nick glanced around. We were seated in a corner of the larger portion of the hall, and there was no one within twenty feet

"Okay, Pop," he said, his lips barely moving. "I'll fix it. I got a hack-saw blade sewed up in my belt-figured I might have to break outa this joint if things slipped up outside. But everything's fixed, and I won't be needin' it. Leave it to Nicholas, Pop. We'll spring vou tonight."

DON'T suppose the details of my escape would interest you, Higgsby-although on second thought, there is always a possibility that some day you might find yourself in similar circumstances, and the knowledge would prove useful. . . .

You don't think so? Then I shall merely say that with Nick's invaluable guidance, a suit of his clothes to replace institution garb, and the aid of the saw blade and two bed sheets, I left that accursed place behind me. How I clambered over the stone wall in the darkness-oh, yes, Higgsby, I am quite agile for one of my yearshow I pilfered an imprudently unlocked automobile, a regrettable but necessary expedient, though interesting to me, would doubtless bore you.

So I shall merely remark that by devious ways and various means I finally found myself heading toward Clearwater. Toward dear old Bluegill -and toward that vile creature, that menace to the peace of the world-

Marcus Aurelius Prebble!

I shall never forget, Higgsby, the tide of emotion which swept over me when again I caught sight of the ivycovered walls of my beloved alma mater. Fervently I wished for my luxuriant whiskers to hide my quivering lips from the prying eyes of the night. And fervidly I cursed the fools who had deprived me of my hirsute adornment-and with even greater fervor cursed Prebble who was responsible for everything.

Enroute to Clearwater, I had decided upon a course of action. I knew Bluegill as I knew the palm of my hand; and I knew exactly where Prebble would be at that particular moment. Quietly but without undue stealth I made my way beneath familiar old elms to the east wing of the dormitories. The main door, as I knew, was never locked-we maintain an honor system at Bluegill-and I entered the building without difficulty.

In retrospect, now, I can see myself creeping like an avenging angel through the silent, dimly illuminated corridor toward Prebble's room. recall feeling a sense of, shall I say, exaltation as I turned the knob and slipped into his bed chamber-as one might feel upon whom rests the fate of the world.

Indeed it did actually rest solidly upon my shoulders.

Prebble was snoring lustily, but the raucous sound ended in a choking gurgle as my fingers closed about his throat. I imagine he must have been somewhat startled to be awakened thus rudely from sound sleep, but that, unfortunately, was unavoidable, for I

could not permit a chance outcry. His fat neck squirmed within my grasp. and I heard his body thrashing about on the bed.

"Prebble!" I hissed. I know, Higgsby, that the term is usually reserved for cheap fiction, but I really did hiss. "Prebble, this is Dinwiddie. You have come to the end of your trail. A Din-widdie always pays his debts!" Which was, I should say, a quite effective little speech.

He did not reply, doubtless because he could not, for I continued squeezing with undiminished pressure.

Abruptly he collapsed like, I should say, a sudden deflated balloon. I held him for an additional moment or two to be certain that he was attempting no subtle ruse. Then, assuring myself that the shades were drawn and

the door locked, I pressed the light

Prebble lay sprawled upon his bed in his flannel night shirt, unconscious, and breathing quite stertorously. Moving with a speed and precision which surprised even me, I bound him securely with cord I had discovered in the automobile, and gagged him with the bed clothes. Then I began a systematic search of his clothing for something I knew he always carried, and finally found what I sought—a jack-knife. I approached Prebble . . . what, Higgsby?

JES, of course, that was the source of the blood. . . Oh, my dear Higgsby, don't be absurd! I didn't kill him! Nothing like that entered my mind.

I merely severed his hands at the wrists! You see, I reasoned that, minus those very necessary members, he would be helpless to continue his experiments! It was during the-operation that I had to rid myself of my coat and vest, for they became somewhat

Afterward I made my way to his laboratory and smashed a remarkable looking apparatus, a device whose intricate construction quite baffled me-

Higgsby-stay away from that 'phone! Stop, I say! This-this gat, as Rozelli would call it, is loaded! . . now, wrench out that wire . . . quick! . . And give me your coat and vest.

They will be too large, I fear, but under the circumstances they must suffice . . . now, enter that closet . . . excellent. . . .

I regret that this is necessary, Higgsby, but you've been so unreceptive that I am compelled to seek other counsel. I'll be seeing you on the hot seat, as Rozelli would say. . . .

Oh, my poor head!

THE WORLDS OF IF

A Scientifiction Masterpiece

By STANLEY G. WEINBAUM

Next Issue's HALL OF FAME Selection!



Thumbnail Sketches of Great Men and Achievements By MORT WEISINGER

THE STARS LOOK DOWN

T was a hot day, one of those scorchers that makes you wish for the icy blasts of winter. The man staring up into the sky at the fiery copper bowl that was the sun unknotted his tie, loosened his collar.

He brought one hand up to his head, shaded his eyes. For many moments he kept still, his body absolutely rigid, as he continued gazing at the blazing solar or he He segred segrething for something a something that we want to he had a something that the result is that the segrething the segrething that the segrething the segrething that the segrething the segrethin

orb. He seemed searching for something . . . something that wasn't there.

Five minutes went by. Still the man's eyes kept fastened on the celestial
sphere. Finally the molten heat that was bathing the German countryside began to exact its toil from the sun-gazer.

"It's happening—this very moment!" the man whispered to himself as he mopped a tanned brow streaming with perspiration. "The whole world will judge me and my work by what's happening up there this very

minute. If I only knew the result!"

The man closed his eyes, projected his thoughts more than eight thousand miles away, to some lonely outpost on the plant of Brazil. A scientific expedition was working swiftly there, its members busy with the coopes, measuring apparatus and cameras. He could visualize the whole scene clear.

as though he were there in spirit.

The man looked up at the sun once more. It seemed normal in every respect. Yet he knew that simultaneously, several thousand the process of being eclipsed by Earth's moon. That was the odd thing about eclipses. They happened at rare intervals. As-Tibet and dozen of other locations all over the surface of the globe at exactly the correct time to catch them. A miss was as good as a mile. If an astronomer arrived at the last he'd have lost the magnificent spectacle for all time. For no eclipse lasts longer than eight minutes.

Eight minutes in which to judge the work of a litetime! The man shuddered. He went back to his task of imagining the scene in Brazil. He went over each step in detail, as it was probably taking place that very moment. Now the moon is in total. Now they're shooting pictures of the corona through special little rlenses. Now they're photographing the stars . . the stars!

The stars! They would tell the story of

The stars! They would tell the story of his success or failure. They shone during a total eclipse. For the stars shine eternally. It is only the brilliant sunlight that pales them into invisibility. But they leap out in all their cosmic splendor the moment Earth's satellite veils the sun, their majestic

"I can't have failed!" the man repeated to himself. "My theory that space is curved is true. A ray of light from a distant star in passing the sun ought to be bent out of its straight line path. The great mass of the sun pulls light toward it, bends the light of



Albert Finstein

the star. The photographs of the stars during this eclipse will prove that I am right!" Suddenly the man stopped reassuring himself. What was the use of saying the same thing over and over? In a few hours he'd receive a cable telling him the news. He

receive a cause reining num to news. The similed bitterly to himsel, "I am a Jew," he told a nearby companious a journalist. "If my theory is proved wrong Germany will call me a Frenchman and France will call me a German!"

The reporter laughed shortly. "But, Pro-

fessor. If your theory is proved correct—what then? Won't they all have to eat dirt?"

The sun-gazer shrugged his shoulders. He thought of his many critics, of the men who had scoffed at his ideas, shouting that he was wrong. The laws of Newton were good enough for them, they cried. Who was he,

a nobody, to step in and say that Newton was old, antiquated?
But the kind-looking, middle-aged scientist

didn't express his feelings.

"If I'm right- Well, then, science will have marched ahead.'

Hours passed. But the man who had vatched the sun was no longer impatient. He had waited six years-since 1913-for his

theory to be put to a test. He could afford to wait a few hours more.

But how his confidence see-sawed during those long hours! There were times when he felt positive that the astronomical observations would uphold his theory. Other black moments he felt the panic of insecurity. Maybe he was wrong. A little slip some-where. The slightest deviation would have knocked his predictions for a loop,

It was night when the cablegram finally came. It was short, containing about a dozen words. But it told him what he wanted to know. His eyes were misty from excitement as he read the text:

PROFESSOR ALBERT EINSTEIN PHOTOGRAPHS OF BENT STARLIGHT PROVE YOUR THEORY CORRECT CONGRATULATIONS

BRAZIL ECLIPSE EXPEDITION, MAY 15, 1919.

Professor Albert Einstein looked up at the stars now shining radiantly in the heavens. "Thanks, friends," he said gratefully.

And the stars looked down on the modest little scientist, who, single-handed, had revolutionized the entire science of physics!

ALL THE KING'S HORSES

HE boys in the Magdeburg tavern were whooping it up. Prussian soldier, guildsman and loafer made merry. Ale flowed generously. Every-one was having a good time.

Then one of the men waxed philosophical, as men are wont to do when they have sipped enough to give them a warm, pleasant glow.

"You can't get something out of nothing," he stated dogmatically. "That's

why my jug is always empty.

No world-shaking observation, that. And amazingly lucid for a man in his cups. But the bartender took it as a personal affront. "Nobody gives something for nothing!" he threw back at his now impov-

erished customer. "I wouldn't be long in business if I filled jugs-for nothing!" The philosophical imbiber stared mourn-

fully at his empty jug. He scooped some foam from the rim of the stein, transferred it unsteadily to his lips, then made a wry

"Nobody can get something out of nothin'," he repeated. "What do you think, Mr. Burgomaster?"

Otto Von Guericke, Burgomaster of Magdeburg, tossed a silver coin to the bartender. "Here, give this disillusioned soul another drink," he ordered. Von Guericke lit his pipe, looked into the heavy-lidded eyes of the thirsty loafer.

"What would you say, my friend, if I told you that you can get something out of nothing? The strength of twenty horses!"

The ale stopped flowing. Burgomaster Otto Von Guericke was no fool. When he made a statement, it was true. Hadn't he been the first man to invent a machine that could manufacture electricity? Hadn't he

invented the first air-pump?

The citizenry of Magdeburg was impressed. But what did their burgomaster mean, claiming that he could get the strength of twenty horses—from nothing? How?

They asked him. And he told them, "Vacuum!"

Then he got up, paid his bill, and walked out of the tavern, leaving behind him a per-plexed audience. The stew immediately began to look around for another sucker. In a few moments the entire incident was for-

But there was one man in the tavern whose curiosity was piqued by the burgo-master's words. He was a representative King Ferdinand's court. A few inquiries, and he had obtained the home address of the burgomaster.

Presently the noble was knocking at Von Guericke's door.

"I overheard your conversation at the tavern," he greeted the burgomaster, "His majesty, King Ferdinand, has long been interested in your work. If you can demonstrate the state of the sta strate what you claim—that you can get the strength of twenty horses out of nothing—I believe his majesty will reward you well for the entertainment."

"I don't want any reward," Von Guericke replied. "But I'll be glad to illustrate." "Splendid!" beamed the noble. "I'll be expecting you at court next Sunday. By the

way, what did you say would enable you to perform your demonstration?"
"Vacuum!" Von Guericke said mysteri-

ously. "Oh!" The noble paused for a moment.

No further explanation ensuing, he waved

good-by, went back to the tavern.

The whole court was out on the king's estate to witness the show Burgomaster Otto Von Guericke had in store for them. Nobles and ladies buzzed with talk.

"He intends to get something out of noth-

ing . . . the strength of twenty horses."
"How?" asked a comely maid. "Vacuum!" was the mysterious rejoinder.

That one word squelched every heckler. It would, in the year 1654. Presently the guest of honor. Otto Von



Otto Von Guericke

Guericke, rolled up to the king's estate in an ox-eart. The cart carried a strange freight. A huge copper bowl—cut in half. Two huge metal hemispheres. "Your majesty," the Priussian scientist addressed King Ferdinand, "may I have the temporary use of twenty horses from your

stables?"

"Twenty horses!" roared the king. "Why, that's all I've got here!" "I won't take them away." Von Guericke

said pleasantly, a merry twinkle in his eyes. "Quite right, my good man," the king replied. "Quite right!" The regent beckoned regally, gave orders. The twenty horses were brought out in a flash.

Otto Von Guericke tugged the two copper hemispheres over to the royal grandstand.
"What have we inside, your majesty?" he asked politely.

"Nothing!

"That's right . . . nothing!" Saying so, the burgomaster placed the two hemispheres together so that they formed a hollow sphere. Between them he placed a ring of leather soaked in wax and oil, making an airtight joint, but no mechanical connection whatever.

Then, with his air-pump he drew off a great deal of air from the sphere through a hole which he closed with a tap. The twenty horses were brought up, divided into two teams of ten each, and one team was hitched to each of the copper bowls.

The demonstration was now ready. Von Guericke picked up a whip, cracked it at the teams of horses. Each team began tugging at his end of the bowl. Ten horses pulled one way-ten horses pulled the other. But the bowl held. The two hemispheres, though not fastened together by any visible agency, remained solidly together, as though the sphere had never been cut in half.

Von Guericke grinned broadly, cracked the whip at a few horses that seemed to be slacking. The animals dug in, pulled vali-antly in a tug-of-war which couldn't be won.

Ten minutes of this, and the king finally managed to restore his raised eyebrows to their normal level. "Amazing! Amazing, Von Guericke! Ex-

plain, please. Von Guericke explained. "Vacuum."
"Huh?" asked the king. "What's that?"

"A vacuum is the absence of air. A vacuum is nothing. When I pumped the air out of the bowl, the weight of the pressure of the atmosphere on the outside held the bowl together. The atmosphere exerts a pressure of about fifteen pounds to the square inch! Get it?"

The king didn't get it. But he couldn't say so in public, especially after Von Guericke had made it seem so simple. The king ricke had made it seem so simple. The king dared a glance at his nobles. They were nodding wisely, They got it. And he was a dunce.

"Well," said the king, "so what?"

Otto Von Guericke smiled. "I have demonstrated that you can get something out of nothing. A strength that twenty horses could not match."

"Yeah," said the king. "But who wants a vacuum? Who wants nothing?"

Otto Von Guericke couldn't answer that one. But two centuries later, when Thomas A. Edison placed a hairlike carbon filament within a vacuum and then connected the filament to an electrical circuit, creating the first incandescent lamp because the vacuum prevented the filament from burning up, he did some wondering. He wondered whether or not Otto Von Guericke had realized the importance of his discovery . . . a discovery that all the king's horses couldn't beat . . .

and a discovery that gave Edison his greatest

SCIENCE FIGHTS THE PHANTOM FOR

thrill in life!

AWN in war-torn France. Bombs still bursting in air! And inside a shrapnel-proof shelter four aged men sat silently, their faces gaunt from the tension of an all-night vigil.

Four sleepy men who didn't dare to fall asleep. Three of them military officials . . . the fourth a scientist.

One of the military officials, a grand old man with iron-gray hair and a firm jaw, glanced calmly at his wrist-watch. He was France's Secretary of the Navy.

The others nodded wordlessly. Outside,

"Any minute now, gentlemen," he announced. "We'll have some news soon. God pray it be good!" he ended fervently, in a whisper.

the rumbling of the cannon fused with the splitting thunder of exploding bombs. It went on and on and on. . . .

Suddenly the men in the room stiffened to attention. There was a knock at the door. A moment later a uniformed orderly entered

the shelter.

The gray-haired man stood up from his chair, reached for the dispatch in the or-derly's hand. With fingers that fumbled from nervousness he finally managed to break the seal, tear open the envelope. Quickly he scanned the coded message inside.

The Secretary of the Navy was an old man, but when he had finished reading the dispatch the weight of his years suddenly showed their burden. His broad shoulders sagged. His knees buckled. And the flame that had burned in his eyes went out and died

No one spoke. All knew, without being told, the grim portent of the dispatch.

Finally the scientist, Professor Paul Langevin, said something. "Combien . . . how many this time?"

"Six! Six of our finest destroyers sunk by

those devils! And hundreds of our boys drowned like rats. It was our last chance. If only one of those ships could have slipped through!" The admiral of France's navy, also in the

room, gasped. "Six ships. As bad as that. Gentlemen, the Allies are doomed. The Kaiser will win the War. Nothing can smash his U-boat blockade!"

"How can anyone fight an enemy we can-not see?" broke in the third official. "The submarine-it is like a phantom of the deep. It's a silent, invisible weapon of destruction . . . and the submarine will vanquish democ-

racy!"
The Secretary of the Navy grasped Professor Langevin by the shoulder.

"Professor, can't you do something?" the old patriot said desperately, agony written in his eyes. "Every time we send a ship out we are sending hundreds of men . . . most of them mere boys . . . to a watery death. You're a scientist, one of France's greatest. Can't you help us beat this invisible raider that strikes without warning? Those Huns aren't fighters . . . they're murderers!"

Professor Langevin, one of France's most outstanding physicists, was stumped. Science lick the submarine? How? It was impossible. Nevertheless he smiled encour-

agingly at the old soldier.

"We are far from lost yet, sir," he said confidently. "I'll set to work on the problem immediately . . this very evening!"

Hours after he had left the navy officials,

the problem of the submarine menace still dominated Professor Langevin's thoughts. The losses resulting from Germany's U-boat campaign were paralyzing the Allies' navy. One tiny sub could carry enough torpedoes to sink three destroyers. It was ghastly. And here he had volunteered-no, practi-

cally promised—to end the reign of this phantom foe. But how? How could one man conquer a whole unseen navy?

It was night now. And he had wasted valuable day. While he was sitting around, waiting for an idea, the enemy had probably sent thousands more tons of ships containing precious supplies and men to the depths

Professor Langevin sighed in despair, stared off into the horizon. The star-dotted firmament seemed peaceful. It was so incongruous with the man-made hell that ex-

isted below.

Suddenly brilliant lances of light stabbed upward into the sable darkness. They were the powerful searchlights of the anti-aircraft batteries. The spears of light shifted and darted, then focused upon their prey . . . a German Zeppelin.

Professor Langevin had witnessed dozens of planes caught in the trap of anti-aircraft guns. But the sight of the monster Zeppelin trying to evade the terrific glare of the lights fascinated him. The lights played upon the nose of the big dirigible, lost it for a second, then swung back again.

It would be over in less than a minute, Langevin predicted to himself. The Zeppelin had gambled and lost. If it had slipped across the lines its cargo of high explosives would have fallen upon helpless Paris. But the watchful searchlights of

French guardians had found a target. Bien! A few seconds later the sky echoed with the roar and rumble of the anti-aircraft bar-Vivid flashes of light illumined the clouds, showed up vast rolling puffs of smoke. And then the Zeppelin lit up like a giant Roman candle. Swiftly it fell to the earth below, a blazing mass of incandescent

"Good work, boys!" Langevin muttered. "That's showing 'em how to score a direct

Thank God the Zep wasn't like a submarine, Langevin reflected. You could see a Zep before it struck. You could catch it in the beam of a searchlight. If only the same thing could be done with a U-boat. But obviously no beam of light could penetrate the waves.

But wait a minute! Professor Langevin snapped his fingers. His eyes lit up with hope. Sure, light couldn't pierce the waves and reveal the presence of a submarine. But something else could-and he knew what! If only he could work it out in time. . .

Three weeks later the French battleship Marseille spede along the North Sea, its mighty engines knifing it through the water at twenty knots. On the foredeck a strange quartet of men seemed engaged in a mys-terious performance. Three officials . . . terious performance. and a scientist.

The three men watched in awe as the scientist, Langevin, stood staring steadily at a small crystal that rested amid a maze of apparatus. For two hours they waited, speechless, while he kept watching the crystal, as though it exerted some unholy hypnotic influence over him.

Suddenly the men tensed. For from the crystal there came a resounding, low-pitched hum, like the drone of a tuning fork.

Professor Langevin studied his instru-(Concluded on page 119)

The City of Singing Flame

A Hall of Fame Story

By CLARK ASHTON SMITH

Author of "The Amazing Planet," "An Adventure in Futurity," etc.

TE HAD been friends for a decade or more, and I knew Giles Angarth as well as anyone could be said to know him. Yet the thing was no less a mystery to me than to others at the time; and

it is still a mystery.

Sometimes I think that he and Felix Ebbonly had designed it all between them as a huge, insoluble hoax; that they are still alive somewhere, and are laughing at the world that has been so sorely baffled by their disappearance. And sometimes I make tentative plans to re-visit Crater Ridge and find, if I can, the two boulders mentioned in Angarth's narrative as having a vague re-semblance to broken-down columns,

In the meantime no one has uncovered any trace of the missing men or has heard even the faintest rumor concerning them. The whole affair, it would seem, is likely to remain a most singular and exasperating

Angarth, whose fame as a writer of fantastic fiction will probably outlive that of tastic faction will probably outlive that of most other modern magazine contributors, had been spending the summer among the Sicrras, and had been living allow until Eb-Sicras, and had been living allow until Eb-Sicras, and had been living allow the summariant to was round lying on the rable. I received it in due course of time, after reading many newspaper speculations regarding the double vanishment. The package contained a small, leather-bound notebook. Angarth had written on the flyleaf;

Dear Hastane:

You can publish this journal sometime, if you like. People will think it the last and wildest of all my fictions—unless they take it for one of your own. In either case, it will be just as well. Good-by.

Faithfully, Giles Angarth.

EDITOR'S NOTE

COME stories are for- SCIENTIFICTION O gotten almost as soon as they are printed. Others stand the test of time. Because "The City of



Singing Flame," by Clark Ashton Smith, has stood this test, one of fantasy's prominent fan-journal editors, Mr. Harry Warner, Jr., has nominated it for SCIENTIFICTION'S HALL OF FAME.

In each issue, for several forthcoming numbers, we will reprint one of the most outstanding fantasy classics of all time, as selected by our readers.

We hope in this way to bring a new permanence to the science fiction gems of vesterday and to perform a real service to the science fiction devotees of today and tomorrow.

I am now publishing the journal, which will doubtless meet with the reception Anwill doubtless meet with the reception An-garth predicted. But I am not so certain myself, as to whether the tale is truth or fabrication. The only way to make sure will be to locate the two boulders; and anyone who has ever seen Crater Ridge, and has wandered over its miles of rock-strewn des-olation, will realize the difficulties of such a

The Iournal of Giles Angarth

ULY 31st, 1930.

I have never acquired the diary-keeping habit mainly, I suppose, because of my uneventful mode of existence, in which there has seldom been anything to chronicle. But the thing which happened this morning is so extravagantly strange, so remote from mun-

No Sane Mortal Being Could Resist the



The real people of the city are glants, moving with solemn, hieratic paces

dane laws and parallels, that I feel impelled to write it down to the best of my understanding and ability. Also, I shall keep an account of the possible repetition and continuation of my experience. It will be perfectly safe to do this, for no one who ever reads the record will be likely to believe it.

I had gone for a walk on Crater Ridge, which lies a mile or less to the north of my cabin near Summit. Though differing markedly in its character from the usual landscapes roundabout, it is one of my favorite places. It is exceptionally bare and desolate, with little more in the way of vegetation than mountain sunflowers, wild currantbushes, and a few sturdy wind-warped pines and supple tamaracks.

Geologists deny it a volcanic origin. Yet its outcroppings of rough, nodular stone dad enormous rubble-heaps have all the air of scoriaceous remains—at least, to my non-scientific eye. They look like the slag and refuse of Cyclopean furnaces, poured out in prehuman years to cool and harden into shapes of limitless grotesquery.

Among them are stones that suggest the fragments of primordial bas-reliefs, or small prehistoric idols and figurines. Others seem

Marvel World's Odd Melody of Madness!

to have been graven with lost letters of an indecipherable script. Unexpectedly there is a little tarn lying on one end of the ridge, a tarn that has never been fathomed. The hill is an odd interlude among the granite sheets and crags, and the fir-clothed ravines

and valleys of this region.

It was a clear, windless morning and I paused often to view the magnificent perspectives of varied scenery that were visible on every hand. I marveled at the titan bate on every thand. I marveled at the titan bate of the control of

I strolled on in a zigzag manner for quite some distance. Presently, coming to one of the rubble-fields with which the ridge is interstrewn, I began to search the ground closely, hoping to find a stone that was sufficiently quaint and grotesque in its form to be worth keeping as a curiosity. I had found several such in my previous wanderings.

Suddenly I came to a clear space amid the rubble, in which nothing grew—s space that was as round as an artificial ring. In the center were two isolated boulders, queerly alike in shape, and lying about five feet apart. I paused to examine them. Their substance, a dull, greenish-gray stone, seemed they be considered the substance, a dull, greenish-gray stone, seemed they be considered to the control of the c

Certainly the perfect roundness and uniformity of the boulders were peculiar. And, though I possess a smattering of geology, I

could not identify their smooth, soapy material.

My imagination was excited, and I began to indulge in some rather overheated fantasies. But the wildest of these was a home-place in comparison with the thing that happened when I took a single step forward in the vacant space immediately between the two boulders. I shall ability.

a Mothing is more disconcerting than to miscalculate the degree of descent in taking a step. Imagine then what it was like to find utter nothingness underfoot! I seemed to be going down into an empty gulf, and at the same time the landscape before me vanished in a swirt of broken images and everything went blind. There was a feeling of intense, Hyperborean cold. An indescribable sickness and vertigo possessed me, due, no doubt, to the profound disturbance of equilibrium.

Also-either from the speed of my descent or for some other reason—I was totally un-

able to draw breath.

MY thoughts and feelings were unutterably confused. Half the time it seemed to me that I was falling upward rather than downward, or was sliding horizontally or at some oblique angle. At last

I had the sensation of turning a complete somersault. Then I found myself standing erect on solid ground once more, without the least shock or jar of impact. The darkness cleared away from my vision, but I was still dizzy, and the optical images I received were altogether meaningless for some moments.

When finally I recovered enough to view my surroundings with a measure of perception, I experienced a mental confusion equivalent to that of a man who might find himself cast without warning on the shore of some foreign planet. There was the same sense of utter loss and alienation which would assuredly be felt in such a case—the same vertiginous, overwhelming bewilderers of the same were supported to the control of the control of the control of the form all the familiar environmental details that give color and form and definition to our lives and even determine our very per-

sonalities.

like imminence.

News. standing in the midst of a landscape which bore no degree or manner of resemblance to Crater Ridge. A long, gradual slope, covered with violet grass and studded at intervals with stones of monolithic size and shape, ran undulantly away beneath me to a broad plain with sinuous, open meadows and high, stately forests of an meadow and high, stately forests of an extensive state of the plain seemed to end in a wall of impenetable golden-brownish mist, that rose with phantom pinnacles to dissolve on a sky of lu-

minescent amber in which there was no sun. In the foreground of this amazing scene, not more than two or three miles away, there loomed a city whose massive towers such as the Anakim of undiscovered worlds might build. Wall on beeting wall, and spire on giant spire, it soared to confront the heavens, maintaining everywhere the sevent of the spire of the

A S I viewed this city, I forgot my initial As ense of bewildering loss and alienage, in an awe with which something of actual terror was mingled. At the same time, I felt an obscure but profound allurement, the cryptic emanation of some enslaving spell. But after I had gazed awhile, the cosmic strangeness and bafflement of my unthinkable position returned upon me. Then, I felt only a wind desire to escape from the readon and regain my own world. In an effort to fight down my agitation, I tried to figure out, if possible, what had really happened.

I had read a number of trans-dimensional stories. In fact, I had written one or two myself. I had often pondered the possibility of other worlds or material planes which may co-exist in the same space with ours, invisible and impalpable to human senses.

Of course, I realized at once that I had fallen into some such dimension. Doubt-less, when I took that step forward between the boulders, I had been precipitated into some sort of flaw or fissure in space, to

emerge at the bottom in this alien sphere in a totally different kind of space. It sounded simple enough in a way, but not simple enough to make the modus operandi anything but a brain-racking mystery.

In a further effort to collect myself, I studied my immediate surroundings with close attention. This time, I was impressed by the arrangement of the monolithic stones I have spoken of, many of which were disposed at a fairly regular intervals in two parallel lines and the spoken of the course of some ancient road obliterated by the purple grass.

Turning to follow its ascent, I saw right behind me two columns, standing at precisely the same distance apart as the two odd boulders on Crater Ridge. They were made of the same greenish-gray atone! The made of the same greenish-gray atone! And the present state is one time feet high, and had been taller at one time feet high, and had been taller at one time growth as the splintered and broken away. Not far above them, the mounting slope vanished from established as the portals of a gateway between two worlds? Who could have used the gateway, and for what purpose?

My brain reeled before the infinite vistas of surmise that were opened by such ques-

However, what concerned me most was the problem of getting back to Crater Ridge. The weirdness of it all, the monstrous walls of the nearby town, the unnatural hues and forms of the outlandish scenery, were too much for human nerves. I felt that I should go mad if forced to remain long in such a milieu. Also, there was no telling what hostile powers or entities I might encounter if I stayed.

The slope and plain were devoid of animate life, as far as I could see. But the great city was presumptive proof of human existence. Unlike the heroes in my own tales, who were wont to visit the fifth dimension or the worlds of Algol with perfect sang froid, I did not feel in the least adven-

Why "The City of Singing Flame" Is My Favorite



Harry Warner, Jr.

By HARRY WARNER, Jr.

The main reason I chose "The City of Singing Flame" for STARTLING STORIES' "Hall of Fame" is simple: it's one of the finest fantasies ever written.

Clark Ashton Smith is generally acknowledged to be one of the finest writers of scientifiction and fantasy. His work contains that indefinable something that made Weinbaum, Poe and Lovererff great. Those three are dead, but Luckily, Mr. Smith is still with us. He's one of the few fantasy writers today who consistently writes literature.

"The City of Singing Flame" is perhaps his best-known work; certainly it's one of the best of the myriad stories he's written. In a few thousand words, here is captured an elusive something of the outré, the strange. Of all the living writers of fantasy,

I believe only one—A. Merritt—can compare with C. A. Smith as a word-painter who makes the reader sense that utter other-worldness an alien planet might possess. You'll read a long time before you find another tale to compare with this one. As

the addror said when this yarn was first published, "Smith . . . is too good an artist to tell us everything he saw in the present story." That sums up the whole thing in a nutshell. And Paul's illustration conveys admirably the atmosphere of the story. The yarn's a welcome change from super-science, and although ten years old, the hundreds of fantasies written since make it seem even newer and greater than even.

view in a great bank of the same goldenbrown mist that enveloped the remoter plain. But there were no more monoliths, and it seemed as if the road had ended with those pillars.

NEVITABLY I began to speculate as to the relationship between the columns in this new dimension and the boulders in my own world. Surely the resemblance could not be a matter of mere chance. If I stepped between the columns, could I return to the human sphere by a reversal of my precipitation therefrom? And it's o, by what inconceivable beings from foreign time and space had the columns and boulders been

turous. Frankly, I shrank back with man's instinctive recoil before the unknown. With one fearful glance at the looming city and the wide plain with its lofty, gorgeous vegetation, I turned and stepped back between the columns.

There was the same instantaneous plunge into blind and freezing uglis, the same indeterminate falling and twisting that had marked my descent into this new dimension. At the end I found myself standing, very dizzy and shaken, on the same spot from which I had taken my forward step between the greenish-gray boulders. Crater Ridge was swirling and reelling about me as if in the throes of earthquake. I had to sit down

for a minute or two before I could recover

my equilibrium.

I came back to the cabin like a man in a dram. The experience'seemed, and still seems, incredible and unreal. Yet, it has overshadowed everything else, and has colored and dominated all my thoughts. Perhaps by writing it down I can shake it off a little.

It has unsettled me more than any previous experience in my whole life.

M UGUST 2nd.

I have done a lot of thinking in the past few days and the more I ponder and puzzle, the more mysterious it all becomes. Granting the flaw in space, which must be an absolute vacuum, impervious to air, ether, light and matter, how was it possible for me to fall into it? And having fallen in, how could I fall out—particularly into a sphere that has no certifiable relationship with ours?

But, after all, one process would be as easy as the other, in theory. The main objection is, how could one move in a vacuum, either up or down or backward or forward? The whole thing would baffle the comprehension of an Einstein; and I do not feel that I have even approached the true solu-

tion

Also, I have been fighting the temptation to go back, if only to convince myself that the thing really occurred. But, after all, why shouldn't I go back? An opportunity has been vouchested to me such as no man certain that the wonders I shall see and the secrets I shall learn are beyond imagining. My nervous repidation is inexcusably child-

ish under the circumstances.

August 3rd.

I went back this morning, armed with a revolver. Somehow, without thinking that it might make a difference, I did not step in the very middle of the space between the boulders. Undoubtedly as result of this, my descent was more prolonged and impetutions than before, and seemed to consist one of the control of the consist of the control of the contro

This time, I went boldly down the slope. Keeping as much as I could in the sherrer of that bizarre purple and yellow vegetation, I stole toward the looming city. All swarey still. There was no breath of wind in those exotic trees, which appeared to imitate, in their lofty upright boles and horizontal foliage, the severe architectural lines

of the Cyclopean buildings.

I had not gone very far when I came to a road in the forest, a road paved with stupendous blocks of stone at least twenty teet square. It ran toward the city. I thought for awhile that it was wholly deserted, perhaps disused. I even dared to walk upon it, till I heard a noise behind me and, turning, asw the approach of several singular entities. Perified, I sprang back and watched the passing of those creatures, wondering fearfully if they had seen me. Apparently my fears were groundless, for

they did not even glance at my hiding place. It is hard for me to describe or even visualize them now, for they were totally the state of the state

Trembling with excitement and wonder, I continued my progress through the richly colored undergrowth. As I went on, I perceived for the first time that there were no shadows anywhere. The light came from all portions of the sunless amber heaven, pervading everything with a soft, uniform

luminosity.

All was motionless and silent, as I have said before. There was no evidence of bird, insect or animal life in all this preternatural within a mile of the city (as well as I could judge the distance in a realm where the very proportions of objects were unfamiliar) I became aware of something which at first a sound.

a sound.

There was a queer thrilling in my nerves, the disquieting sense of some unknowa force or emanation flowing through my body. This was perceptible for some time before I heard the music. But, having heard it, my auditory nerves identified it at once

with the vibration.

It was faint and far-off, and seemed to emanate from the very heart of the titan city. The melody was pieccingly sweet and resembled at times the singing of some voluptuous feminine voice. However, no human voice could have possessed the unhuman voice could have possessed the untained notes that somehow suggested the light of remote worlds and stars translated

to sound

Ordinarily I am not very sensitive to music. I have even been reproached for not reacting more strongly to it. But I had not gone much further when I realized the growth of the far-off sound was beginning to exert upon me. There was a sirenlike allument which drew me on hypnotically, made me forger the strangeness and potential perial representations of the stranger of the strang

THE forest continued almost to the city walls. Peering from behind the final boscage, I saw their overwhelming battlements in the sky above me, and noted the flawless jointure of their prodigious blocks. I was near the great road, which entered an open gate that was large enough to admit

the passage of behemoths.

There were no guards in sight, and sev-eral more of the tall, gleaming entities came striding along and went in as I watched. From where I stood, I was unable to see inside the gate; for the wall was stupendously thick. The music poured from that mysterious entrance in an ever-strengthening flood and sought to draw me on with its weird seduction, eager for unimaginable things.

It was hard to resist, hard to rally my will power and turn back. I tried to concen-trate on the thought of danger, but the thought was tenuously unreal. At last I tore myself away and retraced my footsteps, very slowly and lingeringly, till I was beyond reach of the music. Even then the spell persisted, like the effects of a drug, and all the way home I was tempted to return and follow those shining giants into the city. city.

August 5th.

I have visited the new dimension once more. I thought I could resist that sumnoning music; and I even took some cotton-wadding along with which to stuff my ears if it should affect me too strongly. began to hear the supernal melody at the same distance as before, and was drawn onward in the same manner. But this time I

entered the open gate!

I wonder if I can describe that city. felt like a crawling ant upon its mammoth pavements, amid the measureless Babel of ts buildings, of its street and arcades. Everywhere there were columns, obelisks, and the perpendicular pylons of fanelike structures that would have dwarfed those of

Thebes and Heliopolis.

And the people of the city! How is one to depict them or give them a name! I think that the gleaming entities I first saw are not the true inhabitants, but are only visitorsperhaps from some other world of dimen-sion, like myself. The real people are giants, too; but they move slowly, with solemn,

hieratic paces.

Their bodies are swart and their limbs are those of caryatides - massive enough, it would seem, to uphold the roofs and lintels of their own buildings. I fear to describe them minutely. Human words would give the idea of something monstrous and un-couth. But these beings are not mon-strous. They have merely developed in obedience to the laws of another evolution than ours, the environmental forces and condi-tions of a different world.

SOMEHOW, I was not afraid when I saw them. Perhaps the music had drugged me till I was beyond fear. There was a group of them just inside the gate, and they seemed to pay me no attention whatever as I passed them. The opaque, jetlike orbs of their huge eyes were impassive as the carven eyes of andro-sphinxes, and they uttered no sound from their heavy, straight, expressionless lips. Perhaps they lack the sense of hearing, for their strange, semi-rectangular heads were devoid of anything in the nature of external ears.

I followed the music, which was still remote and seemed to increase little in loud-

I was soon overtaken by several of those beings whom I had previously seen on the road outside the walls. They passed me quickly and disappeared in the labyrinth of buildings. After them there came other beings, of a less gigantic kind, and without the bright shards or armor worn by the first-comers. Then, overhead, two creatures with long, translucent, blood-colored wings, intricately veined and ribbed, came flying side by side and vanished behind the others. Their faces, featured with organs of unsurmisable use, were not those of animals. I felt sure that they were beings of a high order of development.

I saw hundreds of those slow-moving, somber entities whom I have identified as the true inhabitants. None of them appeared to notice me. Doubtless they were accustomed to seeing far weirder and more unusual kinds of life than humanity. As I went on, I was overtaken by dozens of improbable-looking creatures, all going in the same direction as myself, as if drawn by the same

siren melody.

Deeper and deeper I went into the wilderness of colossal architecture, led by that remote, ethereal, opiate music. I soon no-ticed a sort of gradual ebb and flow in the sound, occupying an interval of ten minutes or more; but by imperceptible degrees it grew sweeter and nearer. I wondered how it could penetrate that manifold maze of stone and be heard outside the walls.

MUST have walked for miles, in the ceaseless gloom of those rectangular structures that hung above me, tier on tier, at an awful height in the amber zenith. Then, at length, I came to the core and secret of it all. Preceded and followed by a number of those chimerical entities, I emerged on a great square in whose center was a templelike building more immense than the others. The music poured, imperiously shrill and loud, from its many-columned entrance.

I felt the thrill of one who approaches the sanctum of some hierarchal mystery, when I entered the halls of that building. People who must have come from many different worlds or dimensions went with me and before me along the titanic colonnades whose pillars were graven with indecipherable runes and enigmatic bas-reliefs.

Also, the dark, colossal inhabitants of the town were standing or roaming about, intent, like all the others, on their own affairs. None of these beings spoke, either to me or to one another, and though several eyed me casually, my presence was evidently

taken for granted.

There are no words to convey the incomprehensible wonder of it all. And the music? I have utterly failed to describe that, also. It was as if some marvelous elixir had been turned into sound-waves—an elixir conferring the gift of superhuman life, and the high, magnificent dreams which are dreamt by the immortals. It mounted in my brain like a supernal drunkenness as I approached the hidden source.

I do not know what obscure warning prompted me now to stuff my ears with cotton before I went any further. Though I could still hear it, still feel its peculiar, penetrant vibration, the sound became muted when I had done this and its influence was less powerful henceforward. There is little doubt that I owe my life to

this simple and homely precaution.

The endless rows of columns grew dim for awhile as the interior of a long basaltic cavern; and then, at some distance ahead, I perceived the glimmering of a soft light on the floor and pillars. The light soon became an overflooding radiance, as if gigantic lamps were being lit in the temple's heart; and the vibrations of the hidden music pulsed more strongly in my nerves.

THE hall ended in a chamber of immense, indefinite scope, whose walls and root were doubtful with unremoving shadows. In the center, amid the pavement of mammoth blocks, there was a circular pit above which there seemed to float a fountain of flame that soared in one eerie, slowly lengthening jet. This flame was the sole illumination; and also it was the source of the wild, unearthly music. Even with my purposely deafened ears, I was wooed by the shrill and starry sweetness of its singing. I felt the voluptuous lure, the high, vertiginous exaltation.

I knew immediately that the place was a shrine, and the trans-dimension beings who accompanied me were visiting pilgrims.
There were scores of them—perhaps hundreds; but all were dwarfed in the cosmic immensity of that chamber. They were gathered before the flame in various attitudes of worship. They bowed their exotic heads or made mysterious gestures of adoration with unhuman hands and members. And the voices of several, deep as booming drums, or sharp as the stridulation of giant insects, were audible amid the singing of the

fountain.

Spellbound, I went forward and joined them. Enthralled by the music and by the vision of the soaring flame, I paid as little heed to my outlandish companions as they to me.

The fountain rose and rose, till its light flickered on the limbs and features of throned, colossal statues behind it — of heroes or gods or demons from the earlier cycles of alien time, staring in stone from a dusk of illimitable mystery. The fire was green and dazzling. It was pure as the central flame of a star.

It blinded me, and when I turned my eyes away, the air was filled with webs of intricate color, with swiftly changing arabesques whose numberless, unwonted hues and patterns were such as no mundane eye had ever beheld. I felt a stimulating warmth that filled my very marrow with intenser life.

THE music mounted with the flame and I understood now its recurrent ebb and flow. As I looked and listened, a mad thought was born in my mind-the thought of how marvelous and ecstatical it would be to run forward and leap headlong into the singing fire. The music seemed to tell me that I should find in that moment of flaring dissolution all the delight and triumph, all the splendor and exaltation it had promised

from afar. It besought me; it pleaded with tones of supernal melody. And despite the wadding in my ears, the seduction was well-

nigh irresistible.

However, it had not robbed me of all sanity. With a sudden start of terror, like one who has been tempted to fling himself from a high precipice, I drew back. Then I saw that the same dreadful impulse was shared by some of my companions. The two entities with scarlet wings, whom I have previously mentioned, were standing a little apart from the rest of us. Now, with a great fluttering, they rose and flew toward the flame like moths toward a candle. For a brief moment the light shone redly through their half-transparent wings, ere they disappeared in the leaping incandescence, which flared briefly and then burned as before.

Then, in rapid succession, a number of other beings who represented the most di-vergent trends of biology, sprang forward and immolated themselves in the flame. There were creatures with translucent bodies, and some that shone with all the hues of the opal. There were winged colossi, and titans who strode as with seven-league boots. There was one being with useless, abortive wings, who crawled rather than ran, to seek the same glorious doom as the rest. But among them there was none of the city's people. The city's inhabitants merely stood and looked on, impassive and

statuelike as ever.

I saw that the fountain had now reached its greatest height and was beginning to decline. It sank steadily but slowly to half its former elevation. During this interval there were no more acts of self-sacrificing. Several of the beings beside me turned abruptly and went away, as if they had over-

come the lethal spell.

One of the tall, armored entities, as he left, addressed me in words that were like clarion notes, with unmistakable accents of warning. By a mighty effort of will in a turmoil of conflicting emotions, I followed him. At every step the madness and delirium of the music warred with my instincts of self-preservation. More than once, I started to go back. My homeward journey was as blurred and doubtful as the wanderings of a man in an opium-trance. The music sang behind me and told me of the rapture I had missed, of the flaming dissolution whose brief instant was better than aeons of mortal life.

A UGUST 9th,

I have tried to go on with a new story, but have made no progress. Anything that I can imagine, or frame in language, seems flat and puerile beside the world of unsearchable mystery to which I have found admission. The temptation to return is more cogent than ever, the call of that remembered music is sweeter than the voice of a loved woman, And always I am tormented by the problem of it all, and tantalized by the little which I have perceived and understood. What forces are these whose existence and working I have merely apprehended? Who are the inhabitants of the city? And who are the beings that visit the enshrined flame? What rumor or legend has drawn them from outland realms to that place of blissful danger and destruc-tion? And what is the fountain itself, and what the secret of its lure and its deadly singing? These problems admit of infinite surmise, but no conceivable solution.

I am planning to go back once more— but not alone. Someone must go with me this time, as a witness to the wonder and the peril. It is all too strange for credence -I must have human corroboration of what I have seen and felt and conjectured. Also, another might understand where I have

failed to do more than apprehend.

Whom shall I take? It will be necessary to invite someone here from the outer world -someone of high intellectual and aesthetic capacity. Shall I ask Philip Hastane, my fellow fiction-writer? Hastane would be too busy, I fear. But there is the Californian artist, Felix Ebbonly, who has illustrated some of my fantastic novels.

BBONLY would be the man to see and appreciate the new dimension, if he can come. With his bent for the bizarre and the unearthly, the spectacle of that plain and city, the Babelian buildings and arcades, and the temple of the flame, will simply enthrall him. I shall write immediately to his San Francisco address.

August 12th. Ebbonly is here-the mysterious hints in my letter regarding some novel pictorial subjects along his own line were too provocative for him to resist. Now I have explained fully and have given him a detailed account of my adventures. see that he is a little incredulous, for which I hardly blame him. But he will not remain incredulous very long, for tomorrow we shall visit together the city of the singing flame.

August 13th. I must concentrate my disordered faculties. I must choose my words and write with exceeding care. This will be the last entry in my journal, and the last writing I shall ever do. When I have fin-ished, I shall wrap the journal up and address it to Philip Hastane, who can make such disposition of it as he sees fit.

I took Ebbonly into the other dimension today. He was impressed, even as I had been, by the two isolated boulders on Crater

Ridge. "They look like the guttered ends of col-

umns established by pre-human gods," he remarked. "I begin to believe you now."

I told him to go first, and indicated the place where he should step. He obeyed without hesitation, and I had the singular experience of seeing a man melt into utter, instantaneous nothingness. One moment he was there-and the next, there was only bare ground and the far-off tamaracks

whose view his body had obstructed. I followed, and found him standing in speechless awe on the violet grass.
"This," he said at last, "is the sort of thing whose existence I have hitherto merely suspected, and have never even been able to hint

at in my most imaginative drawings We spoke little as we followed the range of monolithic boulders toward the plain. Far in the distance, beyond those high and stately trees with their sumptuous foliage, the golden-brown vapors had parted, showing vistas of an immense horizon. Past the horizon were range on range of gleam-ing orbs and fiery, flying motes in the depths of that amber heaven. It was as if the veil of another universe than ours had been drawn back.

We crossed the plain, and came at length within ear-shot of the siren music. I warned Ebbonly to stuff his ears with cotton wad-But he refused.

ding. But he refused.
"I don't want to deaden any new sen-sations which I may experience," he observed.

WE entered the city. My companion was in a veritable rhapsody of artistic delight when he beheld the enormous buildings and the people. I could see, too, that the music had taken hold upon him. His look soon became fixed and dreamy as that of an opium-eater. At first he made many comments on the architecture and the various beings who passed us, and called my atten-tion to details which I had not perceived heretofore.

However, as we drew nearer to the temple of the flame, his observational interest seemed to lag, and was replaced by more and more of an ecstatic inward absorption. His remarks became fewer and briefer. He did not even seem to hear my questions. It was evident that the sound had wholly bemused and bewitched him.

Even as on my former visit, there were many pilgrims going toward the shrineand few that were coming away from it. Most of them belonged to evolutionary types that I had seen before. Among those that were new to me, I recall one gorgeous creature with golden and cerulean wings like those of a giant lepidopter and scintillating, jewel-like eyes that must have been designed to mirror the glories of some Edenic world.

I, too, felt, as before, the captious thralldom and bewitchment, the insidious, gradual perversion of thought and instinct, as if the music were working on my brain like a subtle alkaloid. Since I had taken my usual pre-caution, my subjection to the influence was less complete than that of Ebbonly. But nevertheless it was enough to make me forget a number of things—among them, the initial concern which I had felt when my companion had refused to employ the same mode of protection as myself. I no longer thought of his danger or my own, except as something very distant and immaterial.

The streets were like the prolonged and bewildering labryinth of a nightmare. But the music led us forthrightly; and always there were other pilgrims. Like men in the grip of some powerful current, we were drawn to our destination.

A S we passed along the hall of gigantic columns and neared the abode of the fiery fountain, a sense of our peril quickened momentarily in my brain, and I sought to warn Ebbonly once more. But all my protests and remonstrances were futile. He was deaf as a machine, and wholly impervious to anything but the lethal music. His expression and his movements were those of a somnambulist. Even when I seized and shook him with such violence as I could

muster, he remained oblivious of my pres-

The throng of worshippers was larger than upon my first visit. The jet of pure, incan-descent flame was mounting steadily as we entered, and it sang with the pure ardor and ecstacy of a star alone in space. Again, with ineffable tones, it told me the rapture of a moth-like death in its lofty soaring, the exultation and triumph of a momentary union with its elemental essence.

The flame rose to its apex; and even for me, the mesmeric lure was well-nigh irreme, the measured litre was well-night irre-sistible. Many of our companions suc-cumbed. The first to immolate himself was the giant lepidopterous being. Four others, of diverse evolutional types, followed in appallingly swift succession.

In my own partial subjection to the mu-sic, my own effort to resist that deadly enslavement, I had almost forgotten the very presence of Ebbonly. It was too late for me to even think of stopping him, when he ran forward in a series of leaps that were both solemn and frenzied, like the beginning of some sacerdotal dance, and hurled himself headlong into the flame. The fire enveloped him. It flared up for an instant with a more dazzling greenness. And that was all.

Slowly, as if from benumbed brain-centers, a horror crept upon my conscious mind, and helped to annul the perilous mesmerism. I turned, while many others were following Ebbonly's example, and fled from the shrine and from the city. But somehow the horror diminished as I went, and more and more I found myself envying my companion's fate, and wondering as to the sensations he had felt in that moment of fiery dissolution. . .

NOW, as I write this, I am wondering why I came back again to the human world. Words are futile to express what I have beheld and experienced, and the change that has come upon me beneath the play of incalculable forces in a world of which no other mortal is even cognizant.

Literature is nothing more than the shadow. And life, with its drawn-out length of monotonous, reiterative days, is unreal and without meaning now in comparison with the splendid death which I might have had-the glorious doom which is still in store. I have no longer any will to fight the ever-insistent music which I hear in memory. And there seems to be no reason at all why I should fight it out. Tomorrow I shall return to the city.

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The Demons of Darkside

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The Denizens of Mercury Ruled a Domain of Eternal Night— Until Barry Garth Invaded that Empire with Light!

T was early, so the ancient televisor was only observed by a scant audience. Sila, the town buried on the edge of Venus' eastern swamp belt, didn't wake till dark.

Barry Garth, almost alone in the scrap metal barroom, put his head in his arms and listened with a weary hatred. He'd heard so many telecasts during the past months. Thousands, it seemed, and all on the same subject.

"A third appeal for clemency was today denied Alice Webster by the Interplanetary Court," rasped the blurred image of the telecast announcer. "This means that the twenty-three-year-old heiress, convicted of murdering her uncle, Gavin Webster, the Mercurian Metals tycoon, will die as scheduled three weeks from today. Her fiancéaccomplice, Barry Garth, has not yet been apprehended by the police, from whom he escaped soon after the trial." "Dirty rat!" hiccuped a space sailor

at the bar. "Leaving a dame to take

the rap by herself!"

"Fishi Ladies and gentlemen!" The teleaster's voice fairly crackled. "Word has just come from Mercury. The private yacht of Wilsey Stevens, third vice-president of Mercurian Metals and chief witness for the prosecution at the murder trial of Alice Webster, crashed on Darkside two hours ago. Our Mercurian informer states that the yacht, the Hermes, struck a magnetic storm before she broke her drag, and was sucked down into the shadow.

"Wilsey Stevens himself was piloting the craft. Since experience has
proven salvage work impossible, and
since no one has ever survived either a
crash or an expedition on the dark face
of Mercury, it must be concluded that
Stevens and his entire crew of six men
are lost. Names of those aboard—"

Barry Garth didn't hear them. He was staring blankly at the telescreen, his big raw-boned frame taut. So Wilsey Stevens was dead, after all. All his lying, all his signing away of two lives, had availed him nothing. Darkside had caught him, and he was dead.

That meant Alice was dead, too. There was no hope now of saving her. He might as well go back and die with

Wilsey Stevens dead! But was he? Who knew what happened on Darkside? No one had ever come back to tell. Perhaps, if the crash hadn't killed him, he might live—at least for awhile. Was there a chance, one meager but all-important chance?

Barry Garth strode out of the barroom then, and there was something strangely ruthless in his dark, handsome face and the set of his wide

shoulders.

The slow Venusian dusk cloaked the single shoddy street. The fever-mists crawled up out of the swamp, and some faraway scaly beast sent up a hissing scream. Blue mud reeked and squelched under Garth's boots. Ahead, a space of desolation with the rocketblown pits filled with water, was the port of Sila, the town's only excuse for existing.

GARTH paused near a cluster of rusty shanties, searching with narrowed blue eyes. Finding what he sought, a cracked and slimy board bearing the legend "Scotia Salvage Co.," he started forward and stopped again, wondering if he were not a little mad

The odds were greatly against him that he could find Stevens alive, or live to come back himself if he did. Darkside was one of the impenetrable mysteries of the System. No one knew what existed under the blanket of everlasting shadow and freakish magnetic currents—except that men who went there never came back!

Garth shrugged. Perhaps he was going mad. To be a crack racing flier with a future and the grandest girl in nine planets, to be, out of a clear sky, accused and convicted of murder, to face an unjust death with that girl was enough to make anyone crazy.

Wilsey Stevens either killed or knew who killed Gavin Webster. His testimony at the trial, convicting Alice and Garth, had proven that. He had woven an unbreakable chain of evidence around them. But they knew they were innocent. Garth's one hope had been to force Stevens to confess. His one meager clue as to discovering Stevens' possible motive for the murder had brought him to Sila, only to end like this

A new thought occurred to Garth. Even if Stevens were dead, the Hermes might yield some clue that would be sufficient to stop Alice's execution and given them another chance.

He knew what he was going to do to the man in the Scotia Salvage Company office. He didn't care. Not all the population of this rotten sinkhole put together added up to Alice Webster. He would cheerfully have shot them all down, if it meant one single chance for her.

As for himself, he was no diamondstudded hero. He wanted to live. He had a right to live!

Barry Garth put his right hand in his

pocket and pushed open the door of the Scotia Salvage Company.

A pungent reek of white Venusian whisky struck his nostrils. The cramped, untidy office was growing dark, but he could see the man who rose from behind the rickety table. He looked into a dark face sunk between tremendous shoulders, with savage gray eyes half-veiled by hair, black, shaggy as that of a bear. Heavy stubble shadowed a square, grim jaw. The man's worn spacemen's kit, wrinkled against a powerful body, was stained and dirty. The tunic was torn open over a black-haired chest.

"There's no job here," growled the man. "And I'm closed for the night." His voice was deep and harsh, with a

slight burr.

Garth shook his head. "I don't want a job," he said.

"Then what do ye want?"

"Your ship," said Garth.
The gun blurred out of his pocket,
snapped softly. A needle laden with a
quick-acting anesthetic caught the man
at the base of his hairy throat. Before

his startled curse could voice itself, the big Earthman fell.

Barry Garth eased his fall. There was something about that bitter, deep-lined face that seemed familiar, even important, but he couldn't bring the half-memory clear. He knew he'd never seen the man. He shrugged and sat down to wait.

The black, starless night shut down, and it began to rain. Staggering under the big man's weight, Garth ventured out into the deserted landing field. There was no one here but himself and

the Scot.

with the Scot's keys. There was a squat, ancient salvage tug inside, one of those disreputable pirates of the space lanes, who preyed on misfortune and made ill luck worse. Garth knew these tramp salvage men. They'd give aid, preferably to private ships, and then strip the owner to his underclothes to pay for the service. He had, in his younger days, lost his first ship to just such vultures.

The name Bruce was painted on the scarred hull. Garth dumped the Scot through the open port and set about checking the ship. Because of the darkness he was forced to risk a small

light.

Some instinct made him look up suddenly. A face was framed in the opening of the door he had thought was closed. It was a thin, unhealthy Martian face, with lank hair and a mouth purpled from chewing finchi. Then it was gone.

Garth jumped for the door and caught a dim glimpse of a tall, awkward form running. But there was no

chance for a shot.

He turned back to the Bruce. He might, of course, have been watched all the time. By whom? Police spies, perhaps. A sharp-eyed space rat who had recognized him and wanted the reward. Or just a curious loafer.

He was far beyond the cloud blanket, out in space, when he saw the little streak of flame on his visi-plate. Another ship, up from Sila, was following him.

Crouched in the pilot's bay, which was little more than a sweltering air-space between banks of machinery and control panels, Barry Garth threw every last atom of speed into the Bruce and cursed its slowness. If that was a police ship following—

But it wasn't. The ship reached its maximum velocity, approximately that of the Bruce, and hung there. It was close enough so that Garth could make out its shape in the brilliant glare of the Sun. It was a squat, shabby salvage tug like the Bruce. Barry Garth frowned.

There was something funny about that. There was nothing ahead but Mercury, and there was no salvage job on Mercury except the Hermes. Besides, it took a damned strong motive to get any man near Darkside.

Uneasy curiosity sent his hand for the televisor switch. But he drew it back. He didn't dare contact that ship. If the Martian back in Sila had anything to do with it, they knew he had stolen the Scot's ship. If not, he didn't dare tip them off. They could radio the Venusian police to pick him up before he hit the shadow.

Garth forced himself to calm, and set about checking his course. Then he jerked bolt upright, sweat bursting in a sudden flood from every port.

The Scot had screamed-screamed in

black, abysmal terror!

Barry Garth stood in the dim glow of the panel light, facing into the darkness toward the stern. The bunkroom was back there, beyond the air-tight door. Garth cradled the needle gun, waiting.

waiting.

The bulkhead door clanged open wildly against the wall. A towering shape burst through it, staggered, and plunged for the lights witch. The cold white glare of full power blazed blindingly.

The Scot stood flattened against the curving hull-wall, every muscle rigid. His face was a ghostly gray and his eyes were made.

Garth forced his voice to be quiet.

"What's the matter?" he asked.

REATH sobbed into the big man's lungs.
"The demons," he whispered. The

burr was deep and thick in his voice.
"They come i' the dark, I can hear
them."
"You've had a nightmare," Garth

"You've had a nightmare," Garth said. "Take a drink and go back to bed."

A measure of sanity returned to the Scot's wild gray eyes. His heavy muscles knotted in his effort to still them. "The light," he said. "It drives them

"The light," he said. "It drives them awa'. They cannot stand the light."

Garth relaxed, remembering that the Scot had been drinking.

"All right, I'll leave the lights on," he agreed. "Go and sleep it off."

The Scot's harsh laugh startled him.
"I'll nae sleep them off while I live, lad." He ran huge scarred hands through his shaggy hair, and looked up again, completely under control. "Now then. What are ye doing, and why?"

"We're going on a salvage job," said Garth evenly. "To Mercury. There's a man there I want to see."

"To Mercury?" Fear leaped bright

in the big man's eyes, but he held it down. "Go on."

Garth told his story.

"Stevens is my last and only hope." he finished. "He must have had a motive, a reason for what he did to us. I've tried every other way to find it, and failed. Now I'm trying this. I'll die if I fail, but I'd have to die anyway. I had to have a ship, a salvage ship, and I knew I couldn't get anyone to go where I'm going voluntarily. I'll get you out of it if I can get out myself. But I'd rather kill every rat in Sila than let this chance go."

"Aye, ye're right," the Scot said.
"And why not? Life's nae a merry
gambol. Where on Mercury is it ye're
going?"

"Darkside."

The Scot's grim mouth opened, but no sound came forth. His eyes widened like ice-gray flames. Garth saw a tremor shoot through him, as though he'd taken a death-blow over the heart. Then he laughed.

The roar of that wild, harsh laughter shook Garth strangely, and sent his blood running boiling hot and then cold. He braced himself and raised his

gui

"Darkside!" the big man whispered. "He's taking me to Darkside. Me, Sandy MacDougal!" He swung to face forward, toward the silver blaze of Mercury. "This is yer doin'! Ye thought ye had me once, ye black demons of hell, but I cheated ye! Ye got Sarasoff, but nae me. Ye've hounded and followed me, and noo ye want me back. But I'll nae come! D'ye hear me? I'll nae come!"

He flung himself forward with startling speed for such a big man. But Garth was ready. His finger closed convulsively on the trigger. MacDougal's hands had only time to close around his throat before they went lax.

Barry Garth dragged the Scot back to his bunk and strapped him in, this time where he couldn't get at the buckles. Then he stood staring down into that lined, bitter face, and he felt himself tremble.

"Sandy MacDougal," he whispered.
"I remember now. He was a crack pilot
on the Mercury run for Interplanetary
Mails nearly fifteen years ago. And he

was reported to be lost on Darkside!" So someone had come back from the shadow. Someone had cheated whatever deadly forces lived in that sunless cone of eternal night. Garth smiled grimly. What one man had done, another could do.

Then he looked at MacDougal again, and his smile died. . . .

TWENTY-FOUR hours went by, keeping himself awake on caffein tablets from the supply locker, crouched in the narrow bay, stripped to the waist. The metal shields were over the ports, but the blaze of the huge, malignant Sun sent in heat that the hardworked refrigerator units couldn't down. The thermometer crawled up and up, and the control levers were almost too hot to touch.

Three times in that period of hours, Garth had thrust another needle into Candy MacDougal, keeping him in drugged quiet. Far more often than that he had cursed the necessity of bringing another man, cursed the luck that had given him MacDougal, of all

"Perhaps," he muttered, "it's my punishment for risking another man's life." Then he thought of Alice Webster waiting in her cell—waiting for a death she didn't deserve. Garth glared red-eyed at the shuttered ports.

"I'll get him back if I can," he said aloud. "But I had to do it! I had to!"

It was the heat, he decided, that made his nerves go tight. The heat and that damned ship behind him that hung on and wouldn't go away. He swore viciously at the image in his visi-plate. It blurred before his eyes, and he felt the cabin spinning. Another caffein tablet helped keep him awake. How much farther was it? He'd wait another hour. MacDougal would come to by then.

Still the heat climbed. Several times Garth found himself on the verge of collapse. His rangy body was tough, but the ordeal of the past months had taken something out of him, and he hadn't eaten regularly since his escape. He kept his aching, burning eyes on the chronometer, and when it reached a

certain mark, he gripped the emergency fuel-dump lever.

The plastic burned his palm, but he pulled it back, watching the gauge drop. He had calculated nicely, and he prayed that his calculations were right. If they weren't, it was just too bad.

When he staggered back to the bunkroom, the Scot was awake. Garth bent

over him.

"Listen," he said. "There's just enough fuel in the tanks to get us to Mercury. You can't go back to Venus, no matter what. Now get in there and stand your watch."

MacDougal looked at him.

"Ye love that lassie, don't ye?" he asked surprisingly.

Garth nodded. "I'll sleep now. And there's nothing you can do about it, MacDougal, so don't try."

The Scot rose stiffly, stood looking

"Ye've the kind of guts I like, lad. Sorry I can't help ye."

Garth's bony face went ugly.

"It takes two pilots to get a ship through the disturbance field. That's one reason why I had to bring you. And you're going to pull your weight!"

MacDougal shrugged.

"Without fuel, I'll have to, for awhile."

Garth hefted the pistol significantly.
"I'll see that you do," he said meaningly. He smiled as MacDougal turned and went down the corridor. And then he groaned as a thought struck him. He had forgotten that ship following them!

He plunged forward, and felt the vibration of the rockets die out of the hull, then start again as the forward jets cut in, decelerating. Raging, Garth burst into the control room and raised the needle gun.

Then the televisor buzzed. Mac-Dougal, almost smiling as he looked into the visi-plate that had given him his chance, flipped the switch.

GARTH saw the duplicate of the Bruce's cramped sweatbox of a cabin blur onto the old screen. A man filled the foreground—a burly man with iron-gray hair and a fighting jaw and level dark eyes. His half-naked

body gleamed with sweat, but even so, there was a compact neatness about him.

"What the hell's going on there?" the man said.

MacDougal laughed.

"Brent, for the first time in my life I'm glad to see yer ugly face!" Relief amounting almost to hysteria rang in his voice. "My young friend here dumped my fuel, so ye can gi' me a tow back to Venus."

Amazement and suspicion vied in

Brent's dark, hard face.

"Akal!" he called. And another face materialized beside his. It was the unhealthy Martian face that Garth had seen back in Sila. "It that the man you saw?"

The Martian licked his purple lips and nodded. Brent scowled,

"What are you trying to put over on me?" he demanded. "You were headed straight for Darkside, and you know it!"

"Aye, but we've changed our plans,"

MacDougal said.

"Then you've given up?" A fierce smile creased Brent's cheeks. "It's just as well. I'd have wrecked you before I'd have let you have what Wilsey Stevens owes me. Though how you got onto it is beyond me.'

Garth bent forward, suddenly taut. "What do you know about Stevens?"

he shouted Brent's black eyes glared at him.

"You know damn well!" he said. "I'm going for what you were, before you lost your nerve. It's funny, too. I'd have though a man with guts enough to tackle Black Sandy there and steal his precious Bruce would have had the guts to do anything."

Garth was abruptly conscious of MacDougal's face. It was lined with a

growing terror now.

"The tow, Brent?" he said. "Ye'll do it?"

"No! I'm going after the Hermes! Radio Venus for help. They'll take the Bruce away from you, but that won't matter much. We independents are nearly dead, anyhow-and a good thing." Garth caught the surprising bitterness in his voice. "We're nothing but a bunch of filthy pirates, anyway.

"Brent!" Garth shouted. "What's in

the Hermes? What do you know about Wilsey Stevens?" Brent frowned.

"I don't know what you're driving at,

and I haven't time to find out. So long!"

The screen went dead, MacDougal shot a shaking hand to the dial, and in the same instant, Garth lunged. The heavy needle gun in his hand rose and Tubes and fragile smashed down, metal shattered. Garth stood back, breathing hard, and cut the forward jets. The flame of Brent's ship passed their dot on the visi-plate.

"Get going," Garth said. "It's Mer-

cury, or slow death for us."

MacDougal looked at him like an animal beaten numb with hopeless fear. Garth shivered, but he stifled the stab of remorse he felt.

"There aren't any demons," he snarled. "You're crazy with drugs and

whisky."

"Why d'ye think I drink?" Mac-Dougal whispered, "So I can stay as sane as I am." He turned to the con-

trols, set the stern tubes blasting again. Garth went back and locked himself into the bunkroom. But it was a long time before he slept. . . .

MIME passed in a blur of rising heat, of dials and gauges that danced before aching eyes, of metal that burned at the slightest touch, of clattering machinery and warm, stale water that did not quench thirst.

At first, after his escape, the fear of failure had risen in Garth in racking waves. The knowledge of Alice Webster, waiting in her cell for him to free her, drove him on incessantly.

The answer to his problem lay on Mercury. He had only to overcome certain obstacles to find it. And success or failure-when it was over, it was over. Alice would die in a few days. There'd be no time to try again.

Garth was rather glad. He knew he couldn't stand another try, another struggle. All that was left to him now was the memory of Alice Webster's face when he kissed her in the courtroom, before they were drawn apart.

MacDougal stood his watches in a dangerous, tight-lipped quiet, drinking steadily from a supply in the locker but

never getting drunk. The little flame of Brent's ship stayed always ahead of them, but unable to break away.

The Bruce and Brent's ship entered the disturbance area almost together, and Garth prepared himself. Now was the time that MacDougal would probably make his last bid for freedom. There was no radio communication to Mercury, due to the nearness of the Sun and the crazy electro-magnetic currents generated by the wild flight of the planet's metallic body across the force-field of the Sun.

But MacDougal would try to semaphore the relay ship that hung above the Twilight Belt, or he could try to regain control of his ship and set her down on one of the mining company

fields.

His face looking more like a death's head than ever, Garth came into the control room. It was empty. He'd taken one foolish step forward before he realized that the bulkhead door wasn't flat against the wall in its hooks.

He caught the blurred movement out of the tail of his eye as he dived forward and heard the crash of the panner flung by McDougal on the metal floor. It was close enough to jar his teeth. Then he was bunched together and springing up, and the heavy pistol that never left him was flying for MacDougal's head.

The Bruce lurched as the Scot swayed back, stunned and bleeding. The machinery bellowed and clanged as timers and compensators went off balance. Garth caught up the needle gun.

"Get over to those controls," he said almost gently. "Or I'll put enough of these needles in you so you'll never

wake up.

Blood was running from MacDougal's temple, matting his shaggy black hair.

"I'll get you out of it, MacDougal," whispered Garth. "I swear I will!"

MacDougal took the controls, uncertainly at first as the wild currents gripped the Bruce, then with strength flowing back into his hands. Garth, watching the struggling machinery, operated manual controls where the electric systems were too deranged, looked curiously at MacDougal.

What had happened, down there on

Darkside, to change him so horribly?

The flame of Brent's ship curvetted across the visi-plate, still ahead. And then, abruptly, there was darkness edging across the field toward the little flame and the little dot that were their two ships—a darkness utter and impenertable.

The dot was so tiny against the immensity of glare and shadow that Garth didn't see it until it was almost on them. MacDougal saw it, too, and took his hands away from the controls, staring at the oncoming edge of darkness.

A T that velocity, it wouldn't be fatal. But it would be enough to crack their outer hull, force them to head for the Twilight Belt and repairs. Brent was in earnest, then. He knew something about Wilsey Stevens, something he didn't want to tell, something big enough to take him to Darkside.

Garth blasted his port steering jets, knocking MacDougall aside to get at the levers. There was a dull, vicious thud somewhere astern. The Bruce yawed and shuddered, and there was a tiny hiss of air finding emptiness.

Violet flames were born abruptly here and there along the metal. Electricity penerated the broken skin in greater strength. The rockets broke in ragged discord as the timers went out. And it began to grow hotter. The refrigerators had quit, short-circuited.

"Vac suits!" yelled Garth, and sent the Bruce hurtling toward the shadow. There was no time to get to the Twilight Belt now, even if he'd wanted to. At these temperatures, a man would roast alive in a matter of minutes.

MacDougal got the suits. He seemed completely beaten, beyond even terror. "What will ye do?" the Scot asked.

"What will ye do?" the Scot asked.
"You're the salvage man," Garth
said.

Brent's ship had already touched the shadow, plunged into it. Garth could follow the crimson streak of her rockets.

"Ye'll have to land and study the damage," MacDougall said finally.

"Then we'll land." Garth pulled the final zipper on his vac suit, switched on the refrigerating unit and gasped with relief. And then the shadow suddenly

touched them!

The temperature shot downward, freezing where it had seared. Electric fire danced and flared through the ship. Garth felt the *Bruce* leap under his hands as wild, mad currents surged against her.

MacDougal laughed suddenly.

"Ye've killed us for nothing, lad," he said evilly. "My Brucie's done, and even if she weren't, Brent's ahead. The labelings to the first one there!" His harsh, wild laughter rang against the helmet phones, and then was silent. And through the silence Garth heard someone whispering, very softly, but he couldn't quite hear the words. MacDougal's eyes met Garth's

"The demons, lad," he whispered.
"The demons of Darkside!"

They struck with a skidding crash that jarred them brutally, but the Bruce was tough and it didn't kill them. Garth, crushed under MacDougal's weight, felt it lift suddenly, heard a broken cry and the shriek of a bent metal port being hurled open. And then he was alone.

Garth had never been so alone, even in prison, or out in space with his racing ship. The cold glare of his torch, thrown out the open port, showed him only an endless maze of crystal spires, glimmering eerily in the light. There was a naked loneliness about those tumbled crystal peaks, held forever in the unchanging vacuum and the un-

imaginable dark.

Garth felt the desolation seeping into him, flowing like water through his bones. The darkness pressed down, a solid thing beyond the narrow shaft of his torch. It was smothering, overpowering. The black of utter blindness, untouched by sunlight since the Universe began.

HE swore loudly, defiantly. The Hermes was somewhere down here. MacDougal was out there, and Brent, and Akal, the Martian. And Wilsey Stevens!

Barry Garth left the ship. The crystals walled around him, flung back his light in broken glints of green and gold, blue and crimson.

"MacDougal!" he shouted over and over, bellowing into his helmet phone.

He heard wild, faint laughter. And then the Universe was drowned out in

a rush of voices.

Whispers, loud and clear, were at his

elbow, and stretching to the very borders of infinity. Whispers not borne by his helmet phone. Whispers that came through the airless dark and into his

brain.

There was something indescribably horrible about them. They reached deep inside him and dredged up buried ugliness—hate, fear, lust and a brutal desire for vengeance he hadn't known he possessed. Did he really hear words, or was it just that his mind formed them from habit, out of the things that stalked inside his skull?

"MacDougal!" he cried, and ran ran engulfed in a mocking sea of whispers that kept pace with him, filling him like an empty vessel with shapes

of naked horror.

Climbing a jagged ridge, he saw the shattered hulk of a wreck. He knew it, even in the dim reflection of his powerful light, by the peculiar design of the rocket tubes. It was the Hermes!

"Stevens!" he shouted, and instantly the whispers surged stronger and louder in rhythms of hatred and murderous rage. Then terror blotted them out.

Perhaps MacDougal was right about the demons. Only the bull strength of the Scot could have brought him through this alive. What had happened to the Sarasoff he'd mentioned, down here in these crystal valleys?

Desperately he got a grip on himself, shouting to drown out the whispers. Then he heard another voice, crying:

"What is it? In God's name—"

Garth stumbled forward, and quite suddenly, the whispers stopped. Sounds rocketed through his head-

phones. MacDougal, crying his lament. Brent, swearing viciously. And a thin,

high scream from Akal.

A pit yawned suddenly beneath him, filled with shards of light broken from the blue-white torch beam. There were men down there, five of them! Lost from some ancient wreck. They were rigid and unchanging in the spatial cold. Garth looked at their dead faces and swayed with a long, icy shudder.

He couldn't find MacDougal, and his voice grew fainter as the Scot wandered farther away in the crystal maze. The Hermes loomed quite close now. Garth moved through showers of flame, over faceted ridges and between rearing cliffs, ever toward that silent ship.

He realized that he was waiting with a terrible fascination for the whispers

to come again.

"Akal!" Brent's voice shouted sud-

denly. "Where are you?"

There was no answer. Garth's torch picked out a stocky figure in a vac suit standing beside the broken hulk of Stevens' yacht. There were other shapes there, strewn on shattered crystals, but they didn't move. Brent had a gun in his hand, one of the deadly proton guns forbidden to civilians.

Quickly Garth came up to him, and stopped.
"This ship is mine," Brent said to

"I don't want the ship," Garth said.

"I want Stevens." Brent gestured.

"There he is, damn him. Mac-Dougal's demons got him." He laughed, but it had a cracked, uncertain quality.

Garth knelt hurriedly. He could see Stevens' strong face clearly. But it wasn't impassive now. It was twisted into a mask of deadly terror. Stevens was dead.

ARTH rose slowly, his sunken blue eyes fixed on the Hermes. His last hope of saving Alice lay there, barred by the stubborn figure of Brent.

"Listen," he said harshly. "I don't want that ship, or anything in it, except information. I'm going in, Brent,"

Brent's gun hand lifted.

"You'd better not," he warned. And suddenly his voice broke out, loud and hard and bitter. "Do you think I'm going to let any man near this ship? Do you think I want to die here? Stevens owes me this. He made me what I am. But I wasn't cut out for a smuggler, nor a damned tramp salvage pirate! Stevens wouldn't let me go. But he's got his-and I want mine!"

Questions broke from Garth, savage, urgent, but were lost in whispers. Again the world was filled with them. goading, driving, lashing him with brutal sensations. They swirled chaotically through him, bringing a jumble of alien voices, Brent's, MacDougal's, Akal's, all shricking fear and death and

No wonder MacDougal was crazy. Garth would be, too, if he lived. He'd even be too crazy to marry Alice. What were the whispers? They weren't demons. Then what were they?

And then things happened. A dark shape plummeted from a crystal peak. hurled itself at Brent, Garth glimpsed a white face gashed with purple. He heard Akal's thought rhythms, heavy

with greed and hate, but most of all, greed.

Brent hadn't seen him in time. Akal had him down in a flash. He was kneeling on his gun hand, battering his tough glassite helmet against the crystals on the ground, Garth leaped forward, gripping the heavy torch. Brent knew something. He couldn't die yet. The torch crashed down on Akal's helmet and knocked loose the life-giving oxygen valve. The Martian squealed, gasped, and fell away.

The whispers had sent Akal mad with the magnification of his greed for whatever was in the Hermes. Garth grabbed up the gun and plunged on into

the wreck.

The cabins were a shambles. Fire from a short-circuit in the control relays had consumed every inflammable substance, every paper. There was

nothing!

Garth stood lax in the shattered cabin. There was nothing to do now but wait for death. His last hope was gone. He had taken MacDougal to his death for nothing. Alice Webster was doomed.

But Brent knew something. He had to shake off this weariness and make him tell what was so important in the Hermes. The demon whisperings surged and swelled now. Garth dropped the gun and began to laugh. He'd solved the secret of Darkside, anyway. He couldn't stop laughing. Brent knew something, but he wouldn't tell. And it didn't matter now. They were all going to die, here in the dark and the whispers.

Louder and louder came those voices. Brent was in the cabin, yelling defiantly. It was something about

Yttrium, and Wilsey Stevens.

Yttrium was rare and valuable, he babbled. Found in the mines of Mercurian Metals, it was stolen and smuggled through Sila to secret agents who bought it for armaments. It was smuggled by Brent and Wilsey Stevens. Stevens flew the stuff from the Twilight Belt on his own yacht. He killed Gavin Webster because he found out, and hung the murder on Alice Webster and Barry Garth.

Brent didn't know about the murder, but Garth could fill in the gaps. He gripped Brent by the arm.

"Let's get away!" he shouted. "Hook onto your cargo of Yttrium and let's

RENT laughed crazily.
"Ship's smashed," he muttered.
"I'm going to stay here with it."

The whispers, surging and swelling came again. Over and over, a hideous monody. Suddenly Brent rushed at him. But he couldn't avoid the attack. The whispers drugged him. He fell under Brent's rush and lay laughing. Laughing, because he couldn't help it, because he had the evidence to save Alice Webster, and he couldn't use it.

Alice. The whispers said her name. He saw her, heard her, touched her. The picture of her steadied him. He stopped laughing and began to fight.

Struggling, they rolled through the broken port and onto the crystal ground. And though Garth's torch was lost, there was light, faint webs of rainbow light tossed from facet to facet.

MacDougal rushed up to them then. A giant with mad gray eyes, he stood above the two, a heavy shard of crystal in his hands, muttering with the whis-

"The demons sent Sarasoff to kill me," he mumbled. "I killed him first. Kill! Kill before they do!"

The shard struck down. Desperately Garth flung Brent aside, took the blow glancingly on his shoulder, and struggled up. Even with Alice strong in his mind, he wanted to kill. He remembered a short-handled pick in his belt. While MacDougal was regaining his

balance, poising the shard for another blow, Garth took the pick and brought it down solidly on the Scot's helmet. It stunned him, but didn't knock him out. Then an amazing change came over MacDougal.

"Their censor-band has relaxed," he said dazedly. "Conscious and subconscious are merged in my brain now. We can communicate with them for a short while. Listen!"

Garth started violently. Brent was shocked back a little to sanity. The whispers were faint. The crystals flickered eerily about the Scot, who was

lying on the ground.

"We realize that we've made a mistake," a strange voice said. "But it's lonely here. You unfamiliar organisms were new, interesting. We thought we might be friends. But we bitterly regret it. We understand now."

Garth stared wildly. Had he gone mad already? The crystals flamed, weaving dim veils of gold and scarlet,

and purple and green.

"Your minds are strange to us," the voice went on. "They give off wavelengths of which we know nothing. We do not know about hate, fear and love. We can but guess at them, and sensory impulses are unknown to us. In some manner we do not understand, we have caused unfavorable reactions in the organisms that have come into our sphere of life. Their mind-waves are confused, and then lost.

"We don't understand, now, why the censor-band, which seems to keep the vibrations of a part of your minds separate from the other part, has slackened in McDougall's brain. But for the first time we can communicate with you."

Why was there light in the crystals? Why had the cold torchbeam broken to

a full spectrum?

"Yes, we're alive," the voice went on.
"You call us crystals. We're carbon, as
you are, but static. We came into
being with this planet and we'll go out
of being with it. We neither die nor
change. But we can't build up vibration of the proper frequency to enter
your conscious minds. That's what you
term them, isn't it?

"In some ways we have, instead, amplified the vibrations of your subsconscious minds, which seem to be a store-

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house for impulses not permitted in your conscious minds. We didn't realize for a long time that your fleshly brains had two centers of thought."

MESE, then, were the demons! "But how do you do it?" Garth managed to ask.

"We build up thought impulses by simple oscillation of our facets," the voice explained. "During this exchange of vibrations, energy is liberated in the form of light. When all of us oscillate to the same frequency, we have quite a powerful output. Solar radiations destroy our thoughts by introducing counter-vibrations. That's why we're powerful only in the screening shadow of this planet.

"We meant no harm. We wanted contact, not destruction. It's very lonely here in the eternal dark, the eternal silence, the eternal thought. We might have helped you. Instead, we have-is killed the thought-killed you. We're glad that this contact has been possible, for we wanted to ex-

(Concluded on page 128)







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WHEN THE CAMERA ERRS

Editor, SCIENCE QUESTION BOX:

They say that the camera never lies.

It is a fact that the charming stars of the

It is a fact that the charming stars of the cinema come to you distorted, sinterpresented, sinterpresented,

Then why is it that movie stars, when seen in person, often look startlingly different than on the screen?-M. L., Metuchen, New Jersey.

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MAN HAS HALO

Editor, SCIENCE QUESTION BOX: Do human beings have a halo? If so, what is the scientific explanation?-E. W., Buffalo, N. Y.

faile, N. Y.

If a thin glass cell is fitted with a certain If a thin glass cell is fitted with a certain the tell of the cell of the cell

well known that thousands of cars are fitted with yellow fog lamps. These are better than white light, but are still far from being satiswhite light, but are still far from being satis-factory. Infra-red rays penetrate still better, but they are useless because they are invis-ible. If the human eye were sensitive to in-fra-red our problem would be solved. We would merely switch on our infra-red lights when fog came in.

And this is exactly what di-cyanin does— it makes the eye sensitive to infra-red rays. Thus, we all have invisible haloes that science can make apparent.—Ed.

CELLS THAT THINK

Editor, SCIENCE OUESTION BOX:

Can one-celled animals think? Does conscious thought exist in the lower forms of animal life?-L. B., Omaha City, Nebr.

mai inter—L. B., Umana City, Nebr.
Some selentists say that protozon are critically some selentists as the protozon are critically some selections are based on experiments such as the following: A paramedium was such as the following: A paramedium was such as the following to the selection of t ond test the creature was able to turn after fifteen trials. On the fifteenth time it was so agile that it was able to turn after the third attempt. A paramecium is able to turn without diffi-culty by simply bending. But the creature in

the their is partially suffocated because rapid the third of the state of the state of the state of the in this confined space. In this condition of starngulation, its movement are limited to starngulation, its movement are limited to possible to say the organism has been taught, its possibility here. It is probably correct its a result of memory; including need in an about the majoration. All of these repicts actions its attentions. All of these repicts actions the sationation. All of these repicts are the lessed only by external stimuli. The entire organic substance of the creature responds to does not prove consciousness. Their shifty of result is the result of refleces—Ed.

GLAND GRAFTING

Editor, SCIENCE QUESTION BOX:
Can human glands be grafted? Or is this just pseudo-scientific talk?—C. B. R., N. Y. C., N. Y.

Transplantation has been tried in both huinsulin-producing gland. All sorts of difficul-ties stand in the way of getting a large sup-ply of gland tissue for grafting or transplanman patients and animals with thyroid, para-thyroid and adrenal glands and pancreas, the

Total and careful gillation and pancreas, the ply of gilland tissue for gratting or transpla.

In this department the distory of STARTLING STORIES will endeavor to answer your questions on modern scientific facts. Please do not submit more than three questions in your little. A many questions as possible will be answered here, but the editors cannot given the preference. Address your questions to SCIENCE QUESTION BOX, STARTLING STORIES, 22 West 48th Street, New York CLI.

tation. The gland used must, of course, be free from germs and from any kind of disease. Healthy glands can be obtained after death, but must be removed within a few hours, and

but must be removed within a few hours, and it is not easy, to get permission and make art is not easy, to get permission and make are in the second of the second operation in short enough time. Enough gland tissue must be grafted to keep the patient in health of the test of his life, because the consuch after transplantation. The second control of the second of the second for growth and the second for the s

THRILLS IN SCIENCE

(Concluded from page 97)

ments, seized the pencil that he had kept ready nearby, made some rapid calculations on a sheet of paper. "Submarine ahead. Here's the position,"

he told the amazed trio of officials.

A minute later the gunners of the Marseille hurled depth charges at the position indicated by Langevin's calculations. There was a brief pause, then the waves disgorged a twisted missile of jagged metal ... metal that had once been a submarine. An oil

stain appeared on the ocean's surface. Later, as the battleship proceeded on its journey back to home port, the three navy men crowded around the scientist.

"How did you do it, Professor?" the admiral asked. He indicated the instrument and the crystal. "How did that tell you the position of the sub?"

Professor Langevin smiled. "It was easy," he told the nautical trio. "Recently I watched a searchlight beam point out a Zeppelin. I realized then that U-boats could be detected in much the same manner-but not with light!"
"Of course not with light!" the admiral

said, who had a smattering of scientific knowledge. "Light can't penetrate water!" "No—but supersonic sound waves can!" Langevin exclaimed. "And supersonic waves, which are inaudible, would catch a subma-rine in its beam. Once the beam met its target—the U-boat—it would be reflected back to the crystal in my detector and set it to vibrating. I knew that the supersonic beam could be concentrated exactly as a lens concentrates light, and so search out the hidden submarine. In other words, gentlemen, the inaudible supersonic beam is reflected only when it meets an object in its path. And the crystal here on deck makes

the sound reflection become audible. That is how we will fight the phantom foe!" And then Langevin strolled away.

The Secretary of the Navy suddenly felt young again. A flame rekindled in his eyes. He turned to the admiral and said softly: "With that man's submarine-detector, the Allies must triumph. And what a wonderful

epitaph we can some day write on the statue of Langevin: 'He revealed what the eye cannot see by using what the ear cannot hear!"



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HORIZONTAL

- An independently inheritable element by the presence of which some particular character in the organism is made pos-
- character in the community sible.
 Compound of hydrogen may be exchanged for a metal or basic radical, forming a Celestial body so distant as to appear like
- a luminous point.
 One of the two muscular organs that bound the mouth and cover the teeth.
 The fundamental unit for force in the 10.
- c.g.s. system.

 13. To draw liquid from.

 14. The Father of Relativity (initials).

 15. Symbol for helium.
- Organ of hearing.

 The period of time in which the Earth completes a revolution around the sun
- (abbr.). Chemistry of the middle ages. Inventor of the astronomical telescope 19. 21.
- inventor of the astronomical telescope (abbr.). Regulated course of eating and drinking. Infectious or pestilential malady. Outgrowth of the epidermis. Portuguese coin. 28.
- 27. 28. 31.
- Practical unit of electric power. Association of Geological Physics (abbr.). Molybdenum (abbr.). Chemical suffix denoting an alcohol.

- Constellation in the sign Virgo. Famous electrical research organization (abbr.). Reproductive cell (plural).
- Reproductive cell (plural). Last two initials of inventor of electric light. The moon,
- 41. Image formed by the convergence of ac-

- 44. Imager formed by the convergence of ac-tual rays, and the convergence of ac-tual rays, of partially carbonized vege-lated to the convergence of the convergence of ac-tual convergence of the conve
- to its diameter.
 To extract, as ore or coal or metal from
- To extract, as ore or coal or metal from ore.
 Wire gage (abbr.).
 Any one of a group of unsaturated hydrocarbons having the formula CnH₂n.
 Chemical symbol for tellurium.
 Unit of electromotive force or difference
- of potential.

 Order of mammais, especially those of a fish-like form with teeth conic or absent, embracing the whales and porpoises.

VERTICAL

- Deep notch or ravine in a mountain ridge. Symbol for erbium. Core of soft iron which temporarily be-comes a magnet during the passage of an electric current through a coil of wire
- cheche current through a coil of wire surrounding irom the source of light, as many roots and some shoots. Unit of germplasm. Unit of germplasm. Unit of germplasm. In liquid coloring-matter. Small inflamed swelling on the edge of the eyelld. Dark, oily liquid obtained by dry distilla-prone, in resinous wood, cost, etc.
- 7.
- Unit of work and energy in the c.g.s. sys-
- tem. 14. of malt Beverage made from a fermented infusion
- or mat. Large ostrichlike Australian bird. Mixture of gases that forms the apparent blue envelope of the Earth. Evergreen tree, 1319
- An attitude, other than horizontal, of the Salt. Small vertebrate parasitic on fishes. Period of time in the history of man or
- 265 29.
- the Barth.

 Evergreen Chinese or Japanese shrub or Devergreen Chinese or Japanese shrub or One of the digits of a foot of a quadruped or biped.

 Pertaining to the wind blown, and the form which the wind blown, and the properties of the properties 30.
- 34. 37.
- 38. 40. 42.
- 47. 18.
- Egg of an insect. East-northeast (abbr.). Disordered in physical condition. Suffix used to indicate hydrocarbons of the acetylene series. Combining forms, an egg. 52

And (Latin).

The Answer is on Page 126 if You MUST Look!

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THE ETHER VIBRATES

(Continued from page 12)

and their antics does not engage our entire attention. There are other things. Glance over this more academic comment.

BERGEY'S BEST COVER

By Charles Hidley

De Charles Hidloy

A greatly improved, issue is the November Structure of the control of the con

Morey illustration.

Second-best story was the reprint with a fair Faul pic. I thought it rather stupid that the two did not keep the machine working until the life-slime crept back to the stage of evolution that they knew.

In July the S.S. cover was No. 8 out of nine, Better this time.—New York, N. Y.

Charlie, skipping over all the rest of the stuff you wrote (which speaks for itself) you tucked an observation away in your third paragraph that hits us right on the button for full acceleration. You wonder why the illustrations aren't arranged in consecutive progression. You know, that is a question which has always intrigued us, too.

Maybe it's because our make-up man ac-tually looks like John R. Neil's Wizard of Oz and thus has a flair for whimsy, or perhaps he just wants to make it harder on you and us.

Of course, we'll make allowances for the opening spread frequently illustrating a scene deep in the yarn and for the exigencies of making up a dummy sometimes fitting a half-page cut in ahead of a full or threequarters which, logically, should come before. In spite of these allowances-and necessities-sometimes there seem no excuses for the shuffling around of illustrations.

And when we start biting our fingernails over this minor but irritating annoyance we start remembering taings that you readers
—pardon us—Vibrators—never know about.
There was the time, for instance, when

the artist read the story in question very carefully(?) and did a lovely two-page spread of a battle between Haitian black and a handful of General Butler's marines. We don't remember the story nor the magazine at this moment—but the illustration got past the cut stage and into page proof before we discovered that the Haitian blacks were rigged out as Mexican insurrectossombreros, banderillos, rifles, bell-bottomed pants and all the trimmings. Whew! Was there some mad scrambling to unscramble that egg and have a fresh cut made in a hurry.

FLOWERS FOR FRIEND

By Max Israel

By Max Israel
Loads and loads of orchids to STARTLING
STORIES for riving us a truly great story.
The Kid from Max's was absolutely topic
The Kid from Max's was absolutely topic
were also very good.
In my opinion, Så, is the bast magasine of
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And this is the second barrel.

FRIENDLY STUFF By Alfred Edw. Maxwell

"The Kid from Mars" want't bad by any "The Kid from Mars" want't bad by any mean only fair. The Kid Statings Econics to Earth was not year. The Kid Statings Econics to Earth was not year. The Rail of Faure rading it before. I wish Marchioni would draw all his pletures like shat one for Cummings fine little yarn. That tale wann't very much. Nothing but warmed ever hash—old hash. It didn't even have new seasoning this time—Opelousna, La.

Well, cut off our legs and call us Shorty, if here isn't a mild complaint about the art work. We should have known better than to mention anything about it. It seems that our artists—as well as our authors—have boosters and knifer-in-the-backers.

So you see you space fliers in the observation chamber don't know the half of our headaches. Maybe that's why they call 'em dummies. So let's take a squint at the order in which one of you pilots of the scientifiction spaceways has arranged our first twelve novels.

THE TWELVE TOPPERS

By Broox Sledge

oy brook Needge To whether the control reader I wonder if an act might be the life print in The ETHER VIBRATES?

I am a linotype operator for the weekly I am a linotype operator for the weekly I was a managed to rake up a considerable collection of selence fettion marsiere in my spacetion of selence fettion and the selection of selence fettion and the selection of selence fettion and the selection of selence and the selection of selence fettion and the selection of selection of selection and the selection of selection o

(Continued on page 124)

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winds; also 8 gustanteed prints -- 25c

(Continued from page 123)

signed to a letter in your columns. I wonder if Dr. Arch Carr (who has written for T.W.S. in 1938 and 1937) and, who, by the way, ityes right here in this town with me, and I are the only lovers of the best brand of fiction in the world in Mississippi, particularly this immediate section.

the only Jovers of the best brand of fiction in mediate section, we belt work among the mediate section, we belt work among the continual approvals and disapprovals of the readers by submitting below my opinion as to be the property of the principle of the prin

Broox is a guy after our heart. And, by the way, he wonders if anybody else from Mississippi ever writes in. Broox, we refer you to Rocketeer Farrell of Tunica. You'll find him about three forest fires back. Dig him out of the crash and see if he is still smoldering.

COVER COMPLAINT By Charles Beling

The latest S.S. is the best yet except for the first issue with Weinbaum's masterpiece. The only things wrong with the present issue are the illustrations and the cover, which are inferior. Oscar J. Friend did a good job on "The Kid from Mars," while The Hall of Fame story was fair. The departments are excelient.

How about making S.S. a monthiy?—Har-rington Park, New Jersey.

That monthly idea isn't so bad, but it's strictly up to you fireside pilots. Enough of you have to make the demand to make such a venture worthwhile. In the meantime, while we are growing and expanding, you rocketeers keep blasting away at this department until the ether shimmers in the hazy distance like Indian summer-or the hot sun raises heat devils on the desert, or on the sunny side of Mercury. If you guys want us to talk back to you from now on, shoot your works at us. And we don't mean all flowers or all brickbats. Just blast off as the mood strikes you, and we'll try to find happy landings somewhere within the Solar System for us all. Already we have a few members of our circle crying out in the wil-derness for back copies. Who can come to this brother's aid, out somewhere between Mars and Jupiter and out of rocket fuel?

BACKNUMBER S.O.S. By Sam Basham, Jr.

by John Designin, Jr.
In a letter of an earlier date I was informed back insuses of FTATILING STORIES were to place this titlem in your THE FTHEK TY.
BRATES dept. If any readors have extra world "for the place this titlem in your THE FTHEK TY.
BRATES dept. If any readors have extra world" "Glants from Electrity." "The Bridge to Earth." "The Fortress of Utopia." and "The Three FTHEKES" of World appreciate it how I could obtain them.—P.O. Box 228, Bardwell, Ky.

Sam, pardon our aside murmur, but we think you can procure a copy of "The Pri-

soner of Mars" and "The Kid From Mars" from Pilot Farrell down in Tunica, Miss.,

pretty reasonably.

While we are not scraping bottom in the old mail bag, yet, we are running close to the bottom of the printer's form. Before the sour puss locks it up on us and blasts off for the next planet let's have a swift glimpse

at one more vote for a reprint. "BRANCHES OF TIME" IS ON OUR LIST!

By Edward Sumers

By Edward Sumers

I have just finished the November issue of a second of the older fram who have read this story. The second of the older fram who have read this story when the second of the second

Laplace's theory of the nebular hypothesis is accepted as an important contribution to celestial mechanics, Edward. However, there are many serious omissions in the theory, and if you think you're going to get a snappy dissertation on the subject right here from us-or make us do some research reading without a few more urgent demands from you space rats—you have a rent in your space suit which is making you light-headed. If heavy stuff is what you want, clamp on a couple of gravities and get a load of this.

Pilot Murphy writes as though he takes his science fiction as seriously as a corres-

pondence course at Harvard. CONCERNING GALILEO

By Andrew P. Murphy

I have been reading s-f magazines for many years now and have enjoyed practically every one of them, STARTLING STORIES particu-

year now and market prove that the provided prov

(Concluded on page 126)

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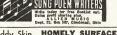
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(Concluded from page 125)

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So this just about packs everything away for this issue and seals the airlock. But we can stand a lot of air-both hot and cold. So you spatial fire-eaters sink your razor-edged fangs into this issue of Startling Stories and tear it apart. Do your growling or purring on paper or postal cards and blast it to us. This is just about your last warning. We aren't going to continue inviting new lightning. We'll be busy insulating against the present steady output. Maybe we can harness some of it and

charge the batteries for our next interplanetary voyage. -Sergeant Saturn

Answers to Crossword Puzzle on Page 120



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MEET THE AUTHOR

Norse Mythology

By EDMOND HAMILTON

Author of "A Yank at Valhalla" and Many Other Scientifiction Novels and Stories



THE origin of this story is really a good many years back. When I was just starting to read books, one of the first I got my hands on was that old favorite of a genera-tion ago, Bullfinch's "Age of Fable." And the section of it that was far and away the most interesting to me was the section relating to the heroes and hero-

ines of old Norse mythology.

That battered copy of Bulland gave me an interest in the Norse legends that has never lessened. In the intervening years,

I've collected quite a shelfful of books on the subject

What always impressed me most about the Norse myths was their close-knit dramatic quality. Those old Visings were a stern lot. They didn't picture their hero-gods as living on in a stagnant, unchang-ing immortality. No, the gods themselves were warriors, and had enemies as redoubt-able as themselves, and would ultimately have to meet those enemies in a battle such as had never been seen before.

I suppose it was natural that, from my long interest in this material, I should finally think of making a story of it. What started me thinking of it was a section in Rydberg's scholarly study of the Norse legends, in which he adduced a mass of evi-dence to show that Odin had been an historical person, who centuries ago had led a great migration of his people into far northern lands, from some unknown place

It made me think-"Suppose Odin and Thor and Loki and all the others were real men, whose exploits were magnified and distorted by time into the myths of the vikings! Suppose Valhalla and Asgard and Jotunheim were real places! Wouldn't it make about the most thrilling tale imaginable if a modern American scientist, of our own time or a little in the future, were to be suddenly dumped down in that ancient, gusty Norse civilization?'

Well, that's the theme of this story—one man accomplished in modern science pitted against the ancient science of the undying Norse heroes of the lost land. I started writing the tale almost three years ago. I've worked on it from time to time, and in spite of the labor involved in research, it's been an enjoyable task. I sincerely hope you readers enjoy the finished story.



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THE DEMONS OF DARKSIDE

(Concluded from page 117)

plain and to tell you that we'll never try it again. As soon as we sense the presence of one of your organisms, we shall cease oscillating until it's gone. You need never-is fear the sensation? —fear us.

"We're sorry. We meant no harm. But we're lonely. Pure thought is wonderful. There's no limit to it. But we're so near the limit, though we hadn't believed it existed. And we're lonely, Lonely. Lonely."

The fires died out of the crystals like fireflies drowned in the mist. Darkness. black and unbroken and cold followed. And there was silence, utter and complete. The whispering had stopped for all time.

MacDougal stirred and opened his eyes. They were wide and dazed, but the madness was gone from them.

"I heard," he whispered, "Somehow, I heard. Thank God!"

Garth turned away. He had no right to watch another man's soul being released from hell

Far away he could make out the dim glow of the Twilight Belt. They could make it now, without madness dogging them. He could semaphore the relay ship and get a stay of Alice's execution. Brent's testimony would change things. Alice would be free, and he, too!

Brent could come back to claim his Yttrium. MacDougal was free of his demons. And Darkside was no longer a death-trap, except for the magnetic currents, which man's engineering genius could soon overcome.

The dark, lonely plain spread around him. He could feel it, though he was blind with the darkness. For just an instant, he could feel the black eternities of flight through frigid space, the silence, the desolation, the terror of a Universe coming to its end.

"I'm sorry," he whispered to the voice-crystal. "So very sorry." Then, quite loudly, he yelled to the others: "Come on. Our air won't last forever. Let's go!"

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